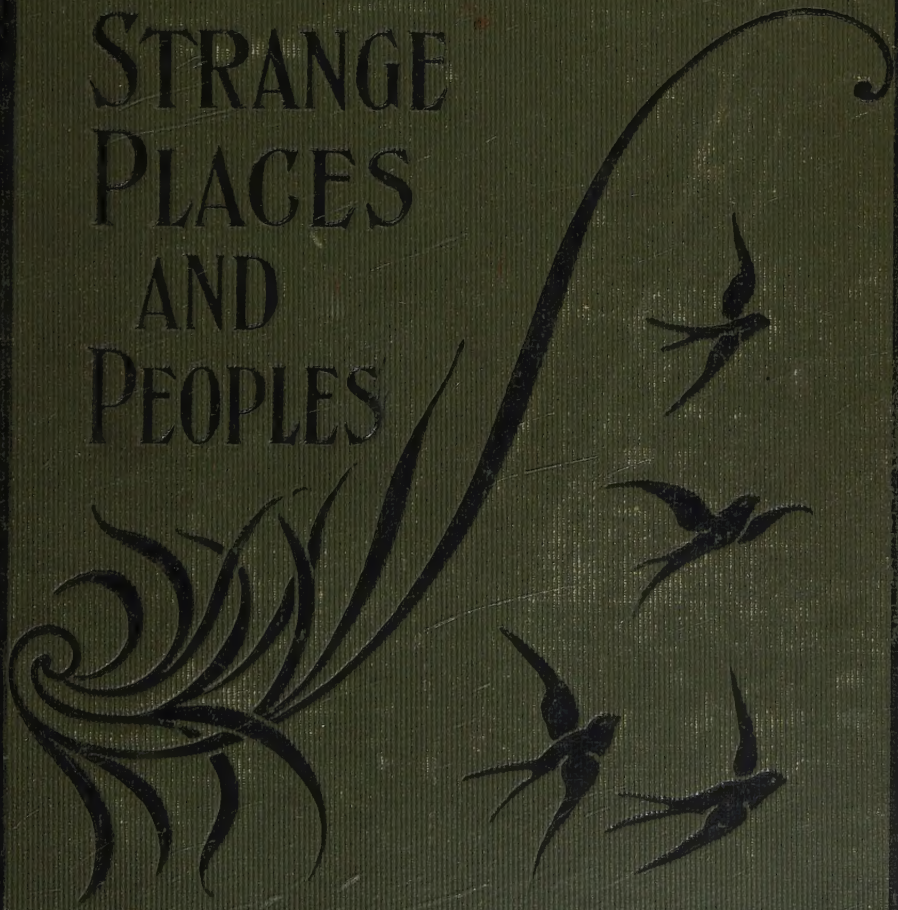
LIBRARY OF TRAVEL

LITTLE JOURNEY TO STRANGE PLACES AND PEOPLES



51

Pinetop #8

Digitized by the Internet Archive
in 2024

https://archive.org/details/littlejourneytos0000unse

NAVAHO BLANKET OF SYMBOLIC DESIGN, MADE IN NEW MEXICO

A LITTLE JOURNEY

TO SOME

STRANGE PLACES AND PEOPLES IN OUR SOUTHWESTERN LAND

(NEW MEXICO AND ARIZONA)

FOR HOME AND SCHOOL
INTERMEDIATE AND UPPER GRADES

BY
GEORGE WHARTON JAMES

A. FLANAGAN COMPANY
CHICAGO

Copyright, 1911

by

A. Flanagan Company.

PUBLISHER'S INTRODUCTION

These pages record the imaginary trip into this most fascinating portion of our wonderful country by a party of high school boys and girls, from Chicago, supposedly selected for the honor because of their scholastic faithfulness and attainments. While no such party ever made the trip exactly as described, all the scenes, all the events, all the chief incidents have occurred, at one time or another, in the author's experience.

The publishers wish to claim all the responsibility for the changes that were necessary in the narrative as written by the author in order to make it conform to the above thought, as they felt that the suggestions of actual participation in the trip by the imaginary party of school boys and girls would give it a charm and interest that otherwise could not be obtained. Hence, if this change seems to bring the author's ego into undue prominence the publishers desire to take this responsibility upon themselves and thus relieve Dr. James of any such charge. He wishes us also to state that he objected to this method of presenting the narrative, as it would make him responsible for certain anachronisms, which the "aware" will realize, as some of the ceremonials could not possibly occur in the order of time in which the following story places them. Deeming this a slight matter as compared with the advantages of presenting the narrative in this form we urged him to withdraw his objection, which he graciously did.

It should also be stated that some of the matters herein treated have been more fully discussed in the author's larger works. Hence repetition has been in a measure unavoidable. To those who wish to study these interesting subjects more fully we have pleasure in referring to the author's list of books to be found on the last page herein.

We feel sure that the results will fully justify our action and that the story as presented will give great delight to a large number of readers, even outside the school circle, throughout the United States.

THE PUBLISHERS.

Chicago, Ill., March 1, 1911.

CHICAGO, June 10, 1910.

MISS LUCILE SNOWDROP,
Bide-a-wee Cottage, 781 St. Charles Ave.,
New Orleans, La.

My Dear Lucile:—

I am going on a trip; a wonderful trip; one of the most wonderful trips, I am told, that can he bad in America within the boundaries of the United States. There are eight of us selected from the schools of our city who have stood highest during the past year in our scholarship, and our expenses are to be paid while we take this trip into New Mexico and Arizona to see the Petrified Forest, the Indians, the Grand Canyon, Meteor Mountain, the Cliff and Cave Dwellings, "The Land of the Standing Rocks," the Roosevelt Dam and many other wonderful places and things, as well as the cities and towns of this scenic, historic and fascinating region.

Of late years it has been the fashion for people who are not used to traveling to go on excursions with specially informed guides. These are called "personally conducted" tours. Ours is to be a personally conducted party in more ways than one. Professor and Mrs. Marcus Young are to go with us as chaperons and to have practical charge of us, while the details of our trip are in the hands of Dr. George Wharton James, an Englishman who has been over thirty years in the United States. During this time he has made a special study of all the things we are going to see, has visited them many times, and has written a number of books about them.

Just think of it. We shall not only see these wonderful, interesting and fascinating objects, but the man who can tell us about them will be right with us on the spot.

I am going to keep a diary, telling of all our doings and sightseeings and so are all the others of the party, and when we return to Chicago, whichever diary is deemed the best is going to be printed and made into a book. You may be sure I will send you a copy as soon as it is printed.

This will be the next best thing to going and seeing the country for yourself. All the same, I wish you were going along. Don't you? Your loving friend,

ELIZABETH BERWYN.

CHICAGO, Jan. 10, 1911.

My Dear Lucile:—

How happy I am! The committee of teachers has decided that my diary is the best account of our "greatest of great trips," and so the following printed pages are written by

Your dearest and best friend,

ELIZABETH BERWYN.

A Little Journey to Some Strange Places and Peoples in Our Southwestern Land

(New Mexico and Arizona)

THOSE who have read the little journeys to the different parts of our great country, and to various foreign countries, may be surprised at the statement that this little journey will take them to the most wonderful, stupendous and majestic scenes on the American Continent and amongst peoples whose lives, habits, social customs and religious ceremonies are more strange, interesting and fascinating than those of any people on the face of the earth.

Many of the sights we shall see will be novel and strange. Some of the places we shall visit are known to be of scenery the most grand, rugged and sublime in the explored world. Many of the customs of the peoples that we shall visit, and their religious ceremonies, are so strange and so entirely foreign to our conception of what human beings can do, that, did we not see them with our own eyes, they would scarcely be believable. No romance that was ever written by the most imaginative mind ever conceived such wonderful objects and strange peoples as we

are about to see. Yet the strangest thing of all is that all these places and peoples are to be found in the heart of our own United States. The Flag of the Free—our incomparable Stars and Stripes—floats over them just the same as it does over New England, the middle West, the North, the South, and all the states on the Pacific Ocean. These places and peoples are American. And it is because our teachers feel that every boy and girl in America should know all that can be known about the wonderful things that America possesses that we are now about to start on this little journey which we are assured will prove more interesting, funny and remarkable than any journey, big or little, we have ever yet taken. It is for this reason also that we are all required to keep diaries, so that the best one may be published for others to know exactly what we have seen.

There are several ways of reaching this fascinating land, but there is one transcontinental line of railway that runs directly through the most interesting part of it. This is the Atchison, Topeka and Santa Fe Railway, commonly known as the *Santa Fe*. Now that we are to go, we are anxious to start as quickly as possible. So we board the "California Limited" in the Dearborn Street Station, Chicago, with our tickets good for a trip through to Phoenix, Arizona, by way of the Grand Canyon, and giving us the privilege of "stop-over," so that we can spend nine months if necessary in visiting the wonderful places and peoples that are before us.

The hour of our departure arrives. The conductor cries "All aboard!" gives the signal to the engineer, and, as we wave our Good-byes and watch the parting salute of our friends, the monster engine begins to move, and our train, slowly at first, and then more rapidly, pulls out of the station, leaves

FISHER'S PEAK AND TRINIDAD, COLO.

the city, and is soon fairly on its way to the land of our dreams.

Thirteen hours' ride and we are at Kansas City. Then we begin our rapid flight across Kansas, across the southeastern corner of Colorado, until we reach the town of Trinidad. Here, on our left, perched high above the city, is an interesting elevation called

which begins to suggest to us some of the grandeur of this great western land. It is composed of pummice stone and other volcanic rock, known as lava float, clearly showing that at some time a great volcano must have been in eruption in this region, pouring out floods of molten lava, which overflowed the country adjacent to the peak. In fact, the indications are that there have been three such separate and distinct lava flows. Where was the volcano? Where is it now? And what kind of country was it at the time the volcano was in eruption? These are most interesting questions, and the answers that are given to us by the scientists are as marvelous and startling as a fairy tale. They say that in the far away early days what is now Fisher's Peak was a great depression, and that the volcano and surrounding country were raised much above its level. It was owing to its being a valley that it received so large a deposit of lava at each of the three successive flows. Then, some time, in the long ages gone by, perhaps millions of years ago, fierce storms beat upon this volcano and all the surrounding country, and, little by little, the rocks were broken up and washed away until the high parts were reduced to a level with the valley. Then, as this reducing process—or "degradation" of the rocks, as the geologists call it—continued, the valley, being protected by these sheets of lava, remained, while the rest of the country yielded to the slow forces of disintegration and was washed away, until, when the historic period arrived and

man appeared upon the earth, this peak was found perched high up and isolated above the surrounding country, practically as we find it today.

One of the most wonderful lessons taught by geology is that to Almighty God "a thousand years

SIMPSON'S REST, TRINIDAD, COLO.

The monument on the topmost peak is erected over the body of the poet-scout

are as one day" and that this world of ours has been hundreds of thousands of years in the making.

Fisher's Peak received its name in 1846, owing to the fact that Captain Fisher of the U. S. Army, with a party of soldiers, got lost here when they were on their way to Santa Fe in that year. There was no clearly defined trail over the Raton mountains at that time, and they were led in the wrong direction.

SIMPSON'S REST.

To the right, above Trinidad, is another interesting pile of rocks several hundred feet above the city. This is the end of the great limestone plateau that extends northward. It is entirely different from the lava rocks of Fisher's Peak on the south. If one looks carefully he can see a small monument not far from the edge of the precipitous cliff. We are told that this is named "Simpson's Rest" from an early day pioneer named Simpson. He was at one time pursued by a band of savages thirsting for his life. He managed to elude his pursuers and, when night came, clambered with great difficulty to the summit of this cliff and for greater security climbed to the top of the highest tree he could find. Here he sat shivering through the cold night, in constant dread lest his hiding-place should be discovered by the blood-thirsty Indians who were determined to slay him. Several times he dozed off to sleep and nearly fell from the tree. Suddenly he was awakened by the falling of rocks, and to his horror he heard voices which clearly showed that the Indians were on his trail. Lit by torches they came nearer and nearer until some of them stood directly under the branches of the tree where he was sitting. He felt sure he was discovered. Breathlessly he awaited the yell which would tell those scattered about on the plateau that the search was ended. Who can tell the delight that filled his heart when, instead of hearing a yell, he heard expressions of disappointment. Finally, after a short pow-wow, the decision of the leader was given that it

was useless to search further. Their expected victim had doubtless escaped and he gave the command to return.

Simpson was so thankful for his escape that he vowed that when he died he would leave money enough to secure for himself a burial at the foot of the tree which had afforded him such a safe shelter and near which a monument should be erected to commemorate his almost miraculous escape.

George Simpson was a poet, as well as a mountaineer, and in the following beautiful lines tells the story of his escape and his desire to be buried in this sightly place.

Lay me to rest on yon towering height,
Where the silent cloud shadows glide,
Where solitude holds its slumbering reign
Far away from the human tide.

I fain would sleep near the old pine tree
That looks down on the valley below,
Like a soldier guarding a comrade's grave,
Or a sentinel watching the foe.

'Twas a refuge once, in the by-gone time,
When a pitiful fate was near,
When my days were young and full of love
For a life I held too dear.

Thro' all the long years that have passed away
Since that night of storm and dread,
I've prayed that the boughs that sheltered me then
Might wave over my dust when dead.

Delve deep my grave in the stern gray rock:
In its rigid embrace let me rest:
With naught but my name on the stone at my head,
And the symbol of faith on my breast.

One mourner, perhaps, may remember where sleeps,
In his rock-bound tomb the lone dead—
May breathe for the loved one to heaven a prayer,
A tear to his memory shed.

Dr. James tells us that Fisher's Peak and Simpson's Rest typify the country upon which we are now about to enter. It is a land of marvelous rock scenery where gigantic mountains tower into the clear blue heavens of Western skies, and where tribes of Indians live in their strange homes, where stranger social customs and most strange religious ceremonies are practiced and which it is to be our pleasure to witness.

At Trinidad an extra engine is put onto our train for we have to climb for seventeen miles until we reach a tunnel bored through the heart of the Raton Mountain. Just on this side of the tunnel is the state line between Colorado and New Mexico. About a mile before we reach the State line, there is a siding called Wootton. Just below the railroad track and about 7000 feet above the level of the sea is a charming little valley not much larger than a good sized New England garden, through which runs Raton Creek, a mountain stream fringed on each side with willows, aspen and cottonwood. Broken, rock-bound and ragged hills surround the little valley. Some are brown and bare; others are covered with a thick growth of scrub-oak, pinion and mesquite, while here and there stand solitary pines, with an occasional grove of young trees springing into being.

UNCLE DICK WOOTTON.

THE chief interest, however, of this little valley centers in the quaint old adobe house with a rude chimney of rocks built on the outside, in which the last days of one of the best known of the old trappers and pioneers of the West were spent. He was known throughout the whole country as "Uncle Dick Wootton," and it is from him that the little station gets its name. Except for a temporary blindness, which was relieved by a surgical operation, his old age was as rugged and healthful as had been his youth, and nothing delighted him more than to have an interested group of auditors around the big open fire-place to whom he could tell the story of his interesting and thrilling adventures. He was born in Mecklenburg County, Virginia, May 6th, 1816, and was christened "Richens Lacy Wootton." It was when he became a frontiersman, less than nineteen years of age, that his companions changed his full christian name to "Dick," and as such he was ever afterwards known. With his pipe in his mouth, his broad-brimmed sombrero on his head, his coat off, his legs crossed, and tilted back in his comfortable arm-chair by the fireside, Uncle Dick was perfectly happy telling his stories of the past. From the published sketch of his life we learned a few of his adventures. Here is the way he begins his history:

"If you want to hear something about what an old hunter and trapper, who has been in this country more than fifty years, has gone through, I reckon I can come as near telling you some things that will

make your hair raise up and knock your hat off, as anybody that you will find, if you travel from one side of this broad land to the other.

"You might as well understand right now, however, that I wasn't cut out for a smooth story-teller, and can't put on any flourishes."

His active frontier life began in 1836. While still under nineteen years of age he undertook to drive twelve mules attached to a merchandise wagon which was going through from Independence, Mo., to Santa Fe, New Mexico. Those were the days of buffaloes and Indians on the plains, and Santa Fe was the capital of the territory that still belonged to Mexico.

The first night he was required to stand guard over the wagon train he had rather an interesting and at the same time amusing experience. He says: "My instructions were to shoot anything that I saw moving outside the line of mules farthest out from the wagons. Nothing had happened so far on our trip to occasion any alarm or anxiety about our safety, and I didn't expect anything was going to happen that night. Still I didn't feel at all inclined to go to sleep, and kept a sharp lookout. About one o'clock at night I heard a slight noise, and could see something moving about, sixty or seventy-five yards from where I was lying on the ground. I wasn't a coward, if I was a boy, and my hair didn't stand on end, although it may have raised up a little. Of course, the first thing I thought of was Indians, and the more I looked at the dark object creeping along toward the camp, the more it looked to me like a blood-thirsty savage. I didn't get excited, although afterwards

they tried to make me believe I did, but thought the matter over and made up my mind that whatever the thing was, it had no business out there. So I blazed away at it and down it dropped. The shot roused everybody in the camp, and they all came running out with their guns in their hands to see what was up.

"I told them I had seen what I supposed was an Indian trying to slip into camp and had killed him. Very cautiously several of the men crept down to where the supposed dead Indian was lying. I stood at my post and listened for their report, and by and by I heard one of the men say, 'I'll be cussed if he hain't killed Old Jack.' 'Old Jack' was one of the lead mules. He had gotten loose and strayed outside the lines, and the result was that he met his death. I felt sorry about it, but the mule had disobeyed orders and I wasn't to blame for killing him."

TRADING WITH INDIANS.

It was not long after he arrived in New Mexico before he was sent at the head of a party of thirteen men on a trading expedition to the Sioux Indians. This is the way the business was conducted: "We started out with ten wagons, loaded with beads and other trinkets, hunting knives, powder and bullets, blankets, and a few old guns. When we reached the trading country we would camp outside an Indian village and find out first whether they were in a trading humor. If they were we would send in a pack-mule or two, loaded with our wares, and establish headquarters at the lodge of some friendly Indian. The

Indian at whose lodge we stopped was then authorized to act as a guard to protect our goods from the thieves who were always hanging about to get something without paying for it.

"We dressed the guard up in a military uniform, which we carried for the purpose, made him wear a stove-pipe hat with a red feather in it, put shoulder-straps on him and gave him a sword.

"I reckon you don't know what a lodge of the kind I speak of is. Well, I will tell you. It's an Indian tent, made of white buffalo-skins; that is, buffalo-skins that have been dressed on both sides. Three poles are taken, about ten or fifteen feet long, and tied together at the top. Then they are spread apart at the bottom and set on the ground. The buffalo-skins are stretched around these poles, with short poles put in between so as to make the tent perfectly round. An opening is left at the top of the tent, through which the smoke from the fire inside passes out. At the top there are also a couple of wings, which can always be so arranged as to break the wind, and keep the smoke from being blown back into the tent. One of these tents is usually as large inside as a good sized room, and they're as comfortable as a house. The fire is built in the center of the tent, and at night a dozen Indians will sometimes lie down in one of them, sleeping in a circle with their feet to the fire. Generally they sleep on buffalo-robes and other undressed skins, but sometimes they have a kind of willow mattress, which makes about as nice a bed as a tired hunter ever stretched himself out on.

"Their peltry was piled up inside the lodges, and

when we had held a powwow with an Indian, and arranged to do business at his lodge, we unpacked our goods and trading commenced. It was all a matter of barter, and no money value was ever placed on anything. We used to get pretty good bargains in these trades with the Indians, although I suppose everybody understands that.

"Their furs, buck-skins, robes and ponies were what we traded for. For a good butcher-knife they were generally willing to give us a buffalo-robe, and for a pound of powder, the gun-caps, and about sixty bullets to go with it, we could almost always get two robes.

"Sometimes when they were disposed to drive hard bargains we had to give them two common butcher-knives for an extra good buffalo-robe, but even that left us a pretty fair profit. A good beaver-skin cost us about thirty cents in trade, and it took three bullets and three charges of powder to get a nicely-tanned buckskin."

That one may understand somewhat the difficulties of living in this country in the early fifties, it is well to recall one of Uncle Dick Wootton's stories. In 1853 he decided to try stock-raising about twenty miles from the site of the present town of Pueblo, Colorado. His wife and children, however, were in Taos, a distance of 165 miles away over the mountains. At this time the Indians were on the war-path and it was only with the greatest daring that a man would attempt to make this trip. Yet, several times Uncle Dick crossed the mountains, always aiming to keep clear of the trail rather than to follow it and riding hard all the

time, sometimes without stopping an hour for sleep. On one occasion he made this trip in a little less than twenty-four hours, and though he came in sight of the Indians at several points along the way, it was only once that they saw him and fired upon him, though he managed to elude their vigilance and escape.

THE RATON PASS

It is to Uncle Dick Wootton that we owe the Raton Pass over the mountains. In his teaming through the country he often had occasion to hunt out new roads, and as far back as 1858 had discovered that this could be made into the best pass, if a satisfactory mountain road were built from Trinidad on the eastern side to the summit. Accordingly in 1865 he applied for a charter from the Colorado legislature authorizing him to construct a toll road from Trinidad to the New Mexico line and another charter from the New Mexico legislature covering the road from the New Mexico line to the Red River. Said he:

"What I proposed to do was to go into this winding, rock-ribbed mountain pass and hew out a new road which, barring grades, should be as good as the average turnpike. I expected to keep this road in good repair, and charge toll for traveling over it, and thought I could see a good business ahead of me.

"I had undertaken no light task. There were hillsides to cut down, rocks to blast and remove, and bridges to build by the score. I built the road, however, and made it a good one too. That was what brought the Santa Fe trail through this way, and as

the same trail extended to Chihuahua in Mexico, my twenty-seven miles of turnpike constituted a portion of an international thoroughfare."

THE CORPORAL'S GRAVE

JUST before entering the Raton tunnel, a lonely grave may be seen. This is the grave of a Mexican corporal who was murdered near Uncle Dick Wootton's house in 1865. At this time the Indians were so troublesome that all wagon-trains passing through to Santa Fe or California had to be escorted by soldiers from Fort Larned. On this occasion there were about 150 wagons escorted by a company mainly of Mexican soldiers under the command of Captain Haley. There was a feud between some of the soldiers and the corporal, whose name was Juan Torres, and three of the men had vowed to kill him. Uncle Dick says these four men came down to his house one night and then left at an early hour. Says he:

"They had not been gone more than half an hour when I heard them talking, not far from my house, and a few seconds later I heard the half-suppressed cry of a man who had, I was satisfied, received his death blow. I had gone to bed and lay for a minute or two thinking whether I should get up and go out to the rescue of the man whose cry I had heard, or insure my own safety by remaining where I was.

"A little reflection convinced me that the murderers were undoubtedly watching my house to prevent any interference with the carrying out of their plot, and that if I ventured out I should only en-

danger my own life, while there was scarcely any possibility of my being able to save the life of the man who had been assailed.

"In the morning when I got up I found the dead body of the corporal stretched across Raton creek, not more than a hundred yards from my house.

"As I had surmised he had been struck with a heavy club or stone, and it was at that time I heard him cry out. After that his brains had been beaten out, and the body left where I found it.

"I notified Captain Haley at once of the occurrence, and identified the men who had been in company with the corporal and who were undoubtedly his murderers.

"They were taken into custody and made a full confession, in which they stated that one of their number had stood at my door on the night of the murder to shoot me if I ventured out to assist the corporal. Two of the scoundrels were hanged afterwards at Las Vegas, and the third was sent to prison for life. The corporal was buried near where the soldiers were encamped at the time of the tragedy."

Entering the tunnel, we leave Colorado behind us, and are in the state of New Mexico,—created a state in the year of our visit, 1910,—and here, while we travel 2,678 feet, we are in midnight blackness. Then, as we emerge into the light, Raton Canyon is before us, down the winding course of which we descend to Raton, and here begins our introduction to what sixty years or so ago was a part of Spanish America. No sooner had we left Raton than Dr. James told us the

following interesting story, pointing out, as he did so, the mouth of the canyon where what he saw occurred.

"It was at Raton, going on twenty-five years ago, that I had my first experience with that wonderful fanaticism known as the Penitentes. It was Easter time and I had been staying at Raton for a week or

PENITENTE MORADA AND CROSSES

two, part of the time wandering over the mountains and surrounding country with one of those rather interesting characters sometimes met with upon the frontier, who knows everybody, and whom everybody knows, who goes where white men, as a rule, dare not go, and does naturally the many things that white men never think of doing. We had become great

chums and it seemed to be his delight to find new and interesting things for me to see.

"One morning he came in in a state of great excitement, and, half in anger at his own forgetfulness, he jerked out an oath and poured forth a fervid stream of statements to the effect that it was Easter time when the Penitente Brothers would be engaged in their wonderful ceremonials. The upshot of it was that we got horses and rode down to the canyon three or four miles south of town and were soon perched upon a hillside looking down upon the little Mexican *jacal* from which the penetrating tones of a flute or flageolet wailed forth its dolorous notes. Following the flute we heard the singing of one or two hymns in rude uncultivated voices of men. This was the sacred *morada* of the *Penitentes.*

"In a short time several of the Penitente Brothers emerged. Each votary had a mask or hood over his head which completely concealed his face and excluded all possibility of recognition, even by his most intimate friends. The upper part of the body was entirely nude, the feet were bare, and the only garment worn was a pair of cotton drawers. Each man held in his hand a scourge—a three-foot-long whip, with a flap-like end, having the shape and appearance of a flexible spoon. This was made of yucca and cactus, and the spoon-shaped end was a large leaf of the prickly pear, one of the most thorny of the cruel cactuses of the southwest. The whole scourge was filled with the spines of cactuses, and no sooner did the procession form and move forward, each hooded figure guided by a friend, than, to our utter amaze-

ment and horror, these cruel scourges were whirled over the shoulders and brought down with resounding 'thwacks' upon the bare backs of those religious fanatics. Every third step the back was beaten, and now and again we could hear the half-smothered shriek of the self-whipper as the piercing thorns penetrated the flesh. It was not long before the blood ran in tiny streams down their backs and the white drawers were stained crimson. But nothing daunted the fanatic fury of this band. On they marched, led by the fifer, the *pitero,* playing on his *pito* a most doleful air, accompanied by the equally dolorous singing of the *Hermano Mayor,* or Principal Brother.

Several hundred yards up the canyon a large cross was standing, and the whipping continued each third step until this cross was reached. Then the *flagellantes* threw themselves face downwards, prostrate before the cross, and lay there for some time, while prayers were offered by the Hermano Mayor. Rising, the cross was marched around, and then the procession returned in like manner to the *morada.*

That afternoon, about three o'clock, another procession formed with five of the brothers whipping themselves. This time there were several women following in the procession. It almost made one sick to hear the swish of those fearful cactus whips whirled over the shoulders and the dull *spat* as they came down *thwack* on the back of the fanatical victims.

There was one of the brothers, however, who

marched along for twenty or thirty steps and at each swing of his whip, though he appeared as if about to strike himself with vigor, he so twisted and turned that his body dodged the prickly whip. There were several spectators near me and some of them spoke out in derision: "Look at that fellow. He is dodging. He is not whipping his sins out." Then to my amaze-

PENITENTE FLAGELLANTES AND CROSS BEARERS

ment, one of the *Hermanos de Luz* (brothers of light) or guides, seized the whip, and, calling upon another of the brothers of light to guide the cowardly member of the fraternity, he proceeded to bring the whip down with a resounding thwack upon the bare back of the pilgrim. At every stroke the blood spattered out on each side and when the procession was over I picked up a number of pieces of wood and leaves,

etc., which were splashed over with the sanguinary fluid.

All this time the *pitero* was wailing out his piercing tones, while the cracked voices of two or three of the men united in singing the hymn, 'My God and My Redeemer.'

The following day the procession with its flagellations was repeated, but in the afternoon there was a startling change. Outside the *morada* leaned three large and heavy rude crosses made of pine trees, on which the bark still remained. Three of the blindfolded brothers were led to these crosses and it seemed with considerable effort on the part of four or five of the attendant brothers of light each cross in turn was lifted upon the back of one of the pilgrims. Then, led by the Hermano and the *pitero* fifing and singing, and followed by a dozen or more women, the procession slowly started up the canyon. The poor wretches on whose shoulders the crosses had been placed staggered along with their awful burdens, evidently moving only by the exercise of the strongest will-power, as the burden seemed heavy enough to have staggered several men. One of the poor victims at last staggered and fell with the cross crushing the upper part of his body. He must have fainted for he lay perfectly still for what seemed quite a little time while the procession halted, but not for a moment did the doleful wailing of the fife or the quavering of the singing cease. There was a brief consultation of some of the brothers of light and three of them stepped forward and raised the cross, whilst another gave the prostrate pilgrim sev-

eral fierce and resounding thwacks with a cactus whip, following his blows with several kicks at the prostrate form. The poor wretch staggered to his feet and again the cross was put on his shoulders, and as he staggered forward, he was urged on his way at about every other step with a vicious blow from the whip of his attendant brother of light. A little further on, one of the other cross-bearers fell, but he seemed to have more strength than the first one who had fallen, and soon regained his feet. It seemed a pitiably long time before that strangely solemn yet pathetically hideous procession reached the little knoll where holes already had been dug for the standing up of the crosses. This knoll or hillock is called *El Calvario*—The Calvary.

Here other ceremonies were gone through, and that evening in the little church in town there was a graphic and dramatic representation of the events that followed the Crucifixion—the darkness, the rending of the Veil of the Temple, the earthquake, the arising of the dead from their tombs, etc.

These things transpire every year in quite a number of the Mexican communities of New Mexico, Arizona and Southern Colorado. The Encyclopedia Britannica declares that the last procession of *penitentes* or *flagellantes* took place in Lisbon, Spain, in 1820. But in this, as in other things, authorities are not always sure of the facts they state. It would make no difference if a thousand authoritative encyclopedias all declared that self-flagellations were at an end, in view of what the eyes of living men and women of the nineteenth and twentieth centuries have seen

in Arizona and New Mexico. I have since seen this performance, with slight variations, at four different settlements.

And yet, even in Arizona and New Mexico, good Catholics will tell you that the *penitentes* no longer exist, for the Archbishop has promulgated certain decrees against it which render its ceremonies impossible. But even this makes no difference to the facts, which are, that the *penitentes* exist and still conduct their woefully piteous ceremonies in the belief that thereby they are partaking of the sufferings of Christ and that they thus render themselves partakers of his ultimate glory.

Again and again I have said to these flagellants, "But how can you be a good Catholic and a *penitente,* when the Archbishop has forbidden it?" The reply has invariably been: "It is nothing to me what he forbids. I don't care whether I am a Catholic or not. I am a *penitente.*" This last declaration is made with a self-conscious air of pride and superiority that denotes that the last word has been said. To be a *penitente* is to be above anything and everything that such an one could desire.

At the same time it cannot be denied that the influence of the church is gradually reducing the number of members of this order and doing away with many of its hideous celebrations. Quietly but firmly the priests are extending their influence and one by one the hillside *moradas* are falling into ruins.

It is hard to tell just how the order of *penitentes* came into existence in Arizona and New Mexico in its present form. For while it undoubtedly was

brought into this region by the Spanish *Conquistadores* some three hundred years ago, it is scarcely to be believed that they brought it in its now existent form. While many a monk and nun had practiced self-flagellation in Europe, and even the sweet-spirited Saint Anthony of Padua, soon after the dawn of the thirteenth century, had founded a fraternity, which regarded the use of the rod and whip in public penance as part of its discipline, such practices had long been frowned upon by the church authorities.

It is well known that there was a "third order" of Franciscans, for as late as 1793 we are told Spanish letters often referred to it as "La Cofradia del terces orden de Franciscanos,"—the brotherhood of the third order of Franciscans.

It is more than possible that the existence of the penitentes in their present form is owing to certain customs that the Mexicans found to exist among the Pueblo Indians and which prevailed from time immemorial. Each pueblo has had its professional penitentes called *caciques* who, at certain periods of the year, retired to solitude and completely fasted, spending their days and nights in prayer interceding with "Those Above" for the forgiveness of the sins of the people. Every pueblo has its stories, more or less legendary, perhaps, about the self-abnegation and self-sacrificing spirit of these noble men. They are looked up to and revered by the Indians as are few white men in any position.

In the olden time, some of these *caciques* used to do penance. Tradition has it that one tribe received its name, Poo-ya-tye, from the fact that the *caciques*

pricked themselves in penitential punishment with the poo-ya, or fierce thorn of the cactus.

It is possible that here we have the secret of the growth of the ceremonies of the Mexican *penitente*. He has combined the idea of the third order of St. Francis with the flagellant and self-sacrificing Indian caciques, and with the fervor of an untutored fanatic, the thing grew to the proportions in which it was found, until the severe penalties of the church, and more potent still, the increasing influx of disapproving white men and women of the new civilization, have either compelled its abolishment, or its retirement to the complete secrecy of hidden recesses in remote mountains or canyons."

As Dr. James concluded his story we all felt that we were indeed in a wonderful land, if such ceremonies as these were still permitted. It merely goes to prove the truth of the old saying: "One half the people never know how the other half lives."

THE OLD SANTA FE TRAIL

But our minds were not allowed to dwell very long on these things. Our attention was called to the fact that we were journeying over what a few decades ago was called the *Santa Fe Trail*.

It is a difficult matter for those who travel over the country in a Pullman car to realize that less than fifty years ago, all freight was taken over this country in "prairie schooners" and passengers were conveyed by the overland stage. We found on the train one of the oldest pioneers of New Mexico and he

kindly gave us this interesting description of the way he used to haul freight over the plains and mountains:

"To begin with then, I had thirty-six wagons, and to each of these wagons were hitched five pairs of oxen. This made ten head of cattle to each wagon, and three hundred and sixty in all. In addition to these, I drove along with the train, a pretty large herd of cattle, upon which I could draw to fill out the teams in case any of the oxen were killed or injured in any way, or as frequently happened, got sore-footed. Altogether it took over four hundred cattle to keep up the train, and when the teams were hitched and stood ready to start, we had a procession nearly a mile long.

"Our wagons were what we called 'prairie schooners.' They were strong, heavy wagons, with long high beds, and would carry loads three or four times as big as can be carried on the ordinary farm and road wagons in use now.

"It took forty men to manage the train. There was one driver to each wagon, and then the wagon-masters, who had a general oversight of the train, and the herders who took charge of the stock when we went into camp, brought the number up to forty.

"In addition to the freight wagons we always had an ambulance in which we carried some of our provisions, and had room for a teamster or any one else traveling with the train, who might happen to get sick along the road. Sometimes we would carry two or three passengers in the ambulance.

"The men were divided into parties of ten each,

which we called a 'mess,' and each 'mess' was furnished with a camp-outfit for cooking purposes. Then each 'mess' selected a cook, who was also a teamster, but got extra pay, and was relieved of guard duty and certain kinds of work which the others had to do.

"When we selected a camping-place and got ready to stop for the night, the wagons were driven up into two lines so as to form a pen or, as we call it, a corral. The tongues of the wagons were turned outside the corral, and the fore wheel of a wagon rested against the hind wheel of the one directly in front of it. Driving them up in this way left the cattle all outside of the corral, and they were then unyoked and driven to water, after which they were watched by the herders, while they fed on the prairie grass, until they got ready to lie down for the night. That was what we called a camp-corral. What we called a 'fighting corral,' which we formed when we were attacked, or likely to be attacked by the Indians, was made by turning the wagon tongues inside the circle of wagons. This brought the cattle all inside the corral, and made it easy to protect them and keep them from stampeding.

"We always started to drive early in the morning. The cattle were driven inside the corral, yoked together, and hitched to the wagons in the order in which they were to start out, those which had been driven behind and had taken the dust of the train one day, going ahead the next.

"As I had charge of the train, I was called the *major domo,* a term we borrowed from the Mexicans

and always used. My two assistants were wagon-masters. My orders had to be obeyed by all my employes as promptly and strictly as would the orders of the captain of a military company by the men under his command, and we moved with about the same precision as a military organization on the march. I had so many men on guard all the time at night, and one detail was relieved by another at regular intervals. When the wagons were driven into line in the morning, each man took his place alongside his wagon, and then awaited the order to start. When the start was made, the wagons had to be kept up within a certain distance of each other, like soldiers marching in single file.

"By observing these precautions and preserving perfect discipline among the men, I avoided having any stragglers to look after when we were surprised by the savages, and could always be prepared for a fight in a few minutes.

"We started from the camp in the morning without breakfast and drove until about ten o'clock, when we stopped to eat. Then we rested until two and sometimes three o'clock in the afternoon, while the cattle were grazing and getting water.

"In this way I always got over from fifteen to twenty miles a day, sixteen miles being an average day's travel. It usually took about four months to make the trip from Kansas City to Fort Union and return.

"Our wagons were not more than half-loaded as a rule when we were going east. About all there was to be hauled that way was the peltry taken in the

mountains, and I generally aimed to buy up or trade for enough of this to enable me to make my expenses out of the profits which I could realize by selling in Kansas City.

"When we got ready to return from Kansas City, however, we always had big loads. To put six or eight thousand pounds on a wagon was not loading uncommonly heavy, and frequently we put as high as ten thousand pounds on a wagon.

"We were paid then, for carrying goods through from Kansas City to Fort Union, eight dollars per hundred, so that a freight bill on a train-load of goods in those times amounted sometimes to many thousands of dollars."

THE MAXWELL LAND GRANT

After leaving Raton we rode for a long time along sixty miles of the eastern edge of the Maxwell Land Grant, a princely domain once owned by the American Fur Company, but now controlled by a foreign syndicate.

Lucien B. Maxwell from whom this grant was named was one of the most noted "mountain men" of the early forties and fifties in Colorado and New Mexico. He was with General Fremont on one of his earlier expeditions when he followed the Arkansas River to its source. For a time he lived at Taos, the interesting pueblo that is the most northerly of all the pueblos of New Mexico. Here he knew Kit Carson, Fremont's chief scout, "Uncle Dick Wootton" and other pioneers.

Maxwell had several narrow escapes from the Indians in his life. On one occasion he had left Taos to go up the Rio Grande to gather a band of horses for government service. "He had succeeded in getting something like a hundred horses, and was on his way back to Taos, when he struck the trail of a large band of Ute Indians.

"To avoid this band he turned down the Arkansas River, and went one hundred and fifty miles out of his way, intending to go over the mountains and come into Taos from the east. Whether the same band of Utes that he had seen turned back and followed him, or whether it was another band which attacked him, is uncertain, but when he was within a few days' ride of Taos he had one of the bloodiest battles with these Indians that any of the mountain men ever had.

"There were twelve men in the party, including Maxwell himself, and they had with them two children, whom he was taking from one of the upper Rio Grande settlements to their friends in Taos.

"While they were taking their breakfast in camp one morning the Indians suddenly made their appearance, and in less time than it takes to tell it they had stampeded and driven off the horses. While a portion of the band was stealing the horses, thirty or forty mounted warriors rode up and fired on Maxwell and his party, killing one and mortally wounding another of his men. It happened that there was a small grove of trees not far from the camp, and hurriedly getting under cover of these trees they determined to fight as long as there was a man of them left.

"In that position they defended themselves against the whole band of red-skins, until the latter tired of the fight and withdrew. Then they found themselves in a sorry plight. All but two of them had been wounded, some very seriously.

"They had no horses and they were a long way, not only from home, but from any white settlement. They could not stay where they were, however, and that night they set out under cover of darkness to walk to Taos."

Traveling in this way by night, and hiding in daylight, without food, and suffering at the same time from hunger and numerous festering wounds, they reached a point about thirty miles east of Taos where they were met by a band of rescuers, of whom Uncle Dick Wootton was one. These latter had heard through a friendly Arapahoe Indian of the fight with the Utes, and though they knew that those who had escaped were making their way towards home under great difficulties, they had not expected to find them in so pitiable a condition. In describing this, Uncle Dick says: "Some had lost nearly all their clothing in crawling through the thick growths of underbrush, all had been so weakened by starvation that they could scarcely stand on their feet, and their undressed wounds were in a fearful condition.

"They had almost given up the struggle to reach home when we found them, and several of those who were the most seriously wounded were begging their more fortunate comrades to leave them to die where they were and take care of themselves.

"I shall never forget how the tears ran down the

cheeks of these poor fellows when they caught sight of us and realized that they were saved, just when they were about to give up all hope.

"We dressed their wounds as well as we could and carried them to Taos, where with careful nursing they all recovered in time."

LAS VEGAS (THE MEADOWS)

The first town of any size in New Mexico, after leaving Raton, is Las Vegas, originally founded in February, 1820. It was not parceled out to settlers, however, until 1835, when it was formally known under the weighty name of the pueblo or town of "Nuestra Señora de los Dolores de Las Vegas"—Our Lady of Sorrows of the Meadows. The Mexican settlers were not anxious to push further east over the Buffalo Plains, where wild and hostile Indians roamed, so Las Vegas was practically the most eastern Mexican settlement. The Navaho Indians from the west, the Utes from the north, and the Comanches from the south and east raided the settlers, stealing their sheep and other live stock and not hesitating to take a life or a prisoner whenever it seemed to their advantage. The "town" was practically a fortified settlement—a strong adobe fort—into which when an Indian alarm was raised, the Mexicans and their stock hastily retreated, there to defend themselves until the danger was past.

KEARNY TAKES POSSESSION FOR THE U. S.

This very thing was done by the settlers only a few days before Colonel Stephen W. Kearny, with his army of occupation, arrived on August 14, 1846. War had been declared between the United States and Mexico, by President Polk, May 13, 1846, and Kearny had been ordered to invade New Mexico and California, with the object of seizing them for the United States. Kearny left Fort Leavenworth, on the Missouri River, in June, with 1,558 men and sixteen pieces of artillery.

As he neared Mexican territory Kearny sent Captain Cooke, with a flag of truce, to bear a message to the Mexican governor, Armijo, stating that he was arriving for the purpose of taking possession of the country. On the 13th of August Armijo replied to Kearny as follows: "You have notified me that you intend to take possession of the country I govern. The people of the country have risen *en masse* in my defense. If you take the country, it will be because you are the strongest in battle. I suggest to you that you stop at the Sapello, and I will march to the Vegas. We will meet and negotiate on the plains between them."

On the morning of the 15th three officers arrived from Fort Leavenworth, bringing to Colonel Kearny his commission as Lieutenant-General, and almost before he had had time to realize the new honor given to him, General Kearny marched into Las Vegas, where he was met by the Alcalde, Don Juan de Dios Maes, climbed to the top of an adobe house over-

looking the plaza, and there made a speech declaring himself Governor of New Mexico and in due possession of the country.

At the same time the rumor was prevalent that Governor Armijo, with six thousand Mexicans, was waiting within two miles of Las Vegas to meet

BIRD'S EYE VIEW OF LAS VEGAS, N. M.

Kearny and his army. The fact was Armijo realized the hopelessness of his attempting to fight Kearny and merely made a pretence of obstructing the American's march, and, before the latter reached Santa Fe—then the capital of the country, even as it is now of the new state of New Mexico—he had fled and left Kearny in peaceable possession.

LAS VEGAS TODAY

Las Vegas is the county seat of San Miguel County. It occupies the west side of the Rio Gallinas, while East Las Vegas, also an incorporated city, occupies the east side. Owning a land grant of 437,000 acres, given originally to the settlers, Las Vegas ought to become a remarkable city in that the income from this grant should not only pay all its taxes, but give it an income for the improvement of the city in a variety of ways. Students of civic government will undoubtedly watch the growth of this city with great interest.

Las Vegas is a progressive town, but naturally when compared with the large cities of the East it is small. Yet it already has some fine business and other buildings, notably the New Mexico Normal University and the Carnegie Library. In East Las Vegas the Castle High School is a fine building that would be an honor to any city.

LAS VEGAS HOT SPRINGS

We were taken out on the electric railway to the Montezuma Hotel, six miles away, at Las Vegas Hot Springs. This is a magnificent building built of red sandstone and iron in the Queen Anne style, which stands in its own park of over 500 acres. The Santa Fe Railway Company has spent over a million dollars here to make one of the finest inland resorts on the American continent. There are hot springs which are equal to any in the world; the altitude, about

6,500 feet, renders malaria impossible, and there are no pests such as fleas, mosquitoes, gnats or spiders.

THE BUFFALO PLAINS

Leaving Las Vegas, as we looked back over the country we had crossed we could well understand and believe the wonderful stories told us of the days when the buffalo was king of these vast stretches of plain.

It scarcely seems possible that there are men now living who can remember when buffalo were positively numbered by millions, roaming in a wild state over all this vast territory as far east as the Missouri River. Yet many school-boys and girls have attended the "Wild West" shows of Buffalo Bill—Colonel W. F. Cody—who gained his title because he was such an expert hunter of these shaggy monarchs of the plains.

It is a sad commentary upon the thoughtlessness and improvidence of the Americans that they have practically exterminated these noble creatures, so that now only a few are to be found, and they are kept in captivity and attended with the greatest care.

With all his improvidence, the Indian would never have been guilty of such a course of procedure as that of the white man in his treatment of the buffalo. Though he killed great quantities and dried in the sun, or jerked, the meat for winter use, he never killed them in a wanton manner.

On our trip we talked with several old buffalo hunters. One of them told us that many a time

he had seen the Indians kill buffalo. "The Indians killed a great many of these animals, but as a rule they only killed what they needed for food. The skin hunters were the fellows who were mainly responsible for the extermination of the buffalo. As long as they were killed only for the purpose of supplying the people on the frontier and the Indians with food, we could not notice that their number was decreasing; but when an army of men came into the country to kill them for the purpose of supplying the eastern market with robes, they didn't last long.

"I used to enjoy seeing the Indians hunt buffalo; that is, when the Indians were friendly and were not hunting white men at the same time.

"A large party of them would start out on horseback, and when they had picked out a band of buffalo they would form a circle around the game and gradually close in on it.

"Then they started their horses on a run, bending their bows and adjusting their arrows as they neared the animals marked for the slaughter.

"They did not shoot until they ran alongside the game, and then their arrows were quite as effective as the bullets of the white hunters. The little Indian boys who followed the hunters took part in the chase and the buffalo calves were left for them to practice on."

SCENIC HIGHWAY TO SANTA FE

Soon after leaving Las Vegas we entered the Glorieta mountains. Of these mountains it has truthfully been said that "the landscape is oriental in aspect

and flushed with color. Nowhere else can you find sky of deeper blue, sunlight more dazzling, shadows more intense, clouds more luminously white, or stars that throb with redder fire. Here the pure rarefied air that is associated in the mind with arduous mountain climbing is the only air known—dry, cool and gently stimulating. Through it, as through a

CONVICTS AT WORK CONSTRUCTING THE SCENIC HIGHWAY BETWEEN LAS VEGAS AND SANTA FE

crystal, the rich red of the soil, the green of vegetation, and the varied tints of the rocks gleam always freshly on the sight."

We were borne over mountains above forests of pine and fir, with transient glimpses of distant prairie; through canyons where fierce rock walls yielded grudging passage and massive gray slopes

bended downward from the sky; and we could picture what a magnificent ride it would be in a fine stage-coach over these mountains, by the new road, the "Scenic Highway," which is now being constructed by the convicts from the state prison, over the fifty-mile stretch between Las Vegas and Santa Fe. We are going to Santa Fe, but it is by railway to Lamy Junction, and thence up the winding branch road that leads us to this ancient capital city. We should all have preferred going by stage; and when we began to talk about the stage, Dr. James went out into the car ahead and brought to us an old man who proved to be one of the old-time overland stage-drivers. He used to drive stage over these mountains long before the Santa Fe railway was built, and the story of his adventures was more romantic and fascinating than a novel. I wish I could reproduce the quaint way in which he recounted some of his adventures. We got him to show us on the map the route that used to be followed.

The old Santa Fe Trail began at Independence, Missouri; passed through Westport, now a part of Kansas City; traversed the plains of Kansas in a direction a little south of west, until it reached the great bend of the Arkansas River. Then it ran close to the river until the present western boundary line of Kansas was crossed. It cut off a corner of Colorado, and then passed into New Mexico and on to Santa Fe, Fort Union being left several miles to one side. That was the line of the original Santa Fe Trail when the Arkansas River was crossed at Fort Dodge. It was changed later so that the Arkansas was crossed

at Fort Bent, where La Junta now is, and passed through Trinidad and across the Raton Mountains on about the line now traveled by the Santa Fe railway. The trail was 825 miles long, and 300 miles of it was very rough and rugged. The first five hundred miles were not so difficult, as the chief obstacles were the streams that had to be crossed, and the mudholes, which could generally be filled up with hay. It was different, however, in crossing the mountains. Said our informant: "There the trail had to be hewn out of the steep hillsides; the ax had to be used to clear the trees and logs out of the canyons; and when the road-makers had done their best, travel was difficult and dangerous.

"In the winter the snows would frequently drift into the canyons and keep piling up until every trace of the trail was obliterated; and breaking a road through these deep snows was no easy matter.

"It took a man with a great deal of nerve to drive six broncos over the mountains when they had to break through these immense snow-drifts, and stage passengers needed to have about as much nerve as the driver. More dangerous drives than these, even, were those which had to be made down the steep mountain-sides when they were covered with ice, and stopping between the crest and the base of the mountains was out of the question. Then, if the driver did not thoroughly understand his business; if he did not have a steady head and a quick eye; if he did not keep his reins well in hand, and make every turn at the proper time, there was certain to be trouble. Overturning a coach in such circum-

stances was a frequent occurrence, and sometimes these accidents were very serious ones.

"Being caught in one of our mountain snow-storms, when travelling became an impossibility, and all that could be done was to sit shivering and freezing in the stage when it came to a stop, waiting for the storm to abate, was another trying experience for those who were so unfortunate as to have to travel in the winter time; but being caught out in a summer hail- and thunder-storm was even worse."

We asked him if he had ever had any adventures with Indians. "Injuns?" he laughed. "Why, I've had more fun with Injuns than you could shake a stick at. Uncle Dick tells a story about Injuns. Here it is. I was the driver of that coach."

"A west-bound stage came in sight one night just at dark, with as much as a hundred arrow-points and broken arrows sticking in the sides and running gear of the coach, and the passengers told a story, which is but a sample of scores of stories I have heard, as I sat by the fire with my guests on an evening when we had a lot of fresh arrivals.

"There were five men, one woman and a child in the party that arrived in the battle-scarred stage, and they were all on their way to Santa Fe.

"In coming through the Comanche country they had a military escort most of the way, but as they saw no Indians, the escort turned back, leaving the stage to go on its way alone. They were making good time over a perfectly level country, and the stage driver was beginning to congratulate himself on having made another trip over the most dangerous

portion of the old trail without having an Indian fight, when a passenger who sat beside him on the box called his attention to what looked like a large ant hill, not more than two hundred yards distant, near the roadside.

"Scanning the little mound closely, the driver at once reached the conclusion that what he saw was an Indian covered up in the sand where he could see the roadway and give the signal for an attack on the stage at the proper time. That a band of Indians was concealed in the long grass and an ambush lay just ahead of him, he was certain; and how to avoid it was the question. He dare not turn back, and turning out on either side might be to plunge into the very midst of the band of savages.

"He was not long in deciding what course he would pursue, because there was no time to lose. The man who sat beside him was informed that there were Indians ahead, and he was directed to swing himself into the coach and notify the other passengers. He did so without being told a second time; and the men gathered up their guns and held them at the coach windows, ready to fire the moment they caught sight of the Indians. Meantime, the driver, who was as brave a fellow as ever cracked a whip over a stage team, had tightened his hold on the reins, shook out his long whip-lash, and touching up his six broncos, just enough to put them on their mettle, held them in check so that they would appear to the Indians to be jogging along at the regulation pace, until he got ready to make his contemplated dash through the ambuscade.

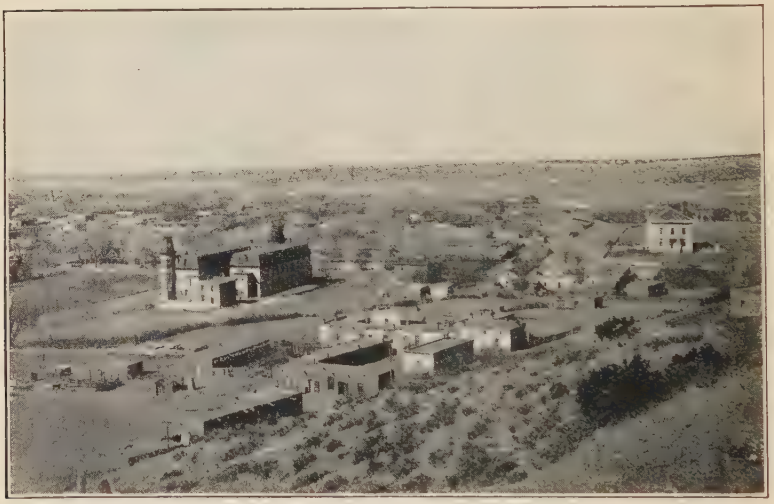
"He waited until he got within forty yards of the sand-covered Indian, when he cracked his whip over the horses and uttered a series of yells which started them at once on a dead run. At the same moment the suspicious-looking sand-pile resolved itself into an Indian, who sprang to his feet and gave a war-whoop which brought a score or more of the Comanches up out of the grass where they had been lying on either side of the road.

"The driver's tactics had taken the Indians by surprise, and he was through the ambuscade before they could fairly bend their bows. The next moment, however, the arrows fell thick as hail-stones about the stage, and a rifle-ball cut a hole through the broad brim of the driver's hat. The passengers returned the fire, but with what effect they could not tell, as they were going at terrific speed, and the stage was rolling from side to side like a ship in a storm.

"They were soon out of reach of the arrows for the time being; but within two hundred yards of the place where they ran into the ambuscade they caught sight of the Indians' horses, which had been hidden in a ravine, and they knew that pursuit was certain. Realizing that there was but one chance for him to save the lives of the passengers, and his own as well, the stage-driver kept his broncos forging along at the top of their speed, hoping to reach the next stage-station, four miles away, before the Comanches should overtake them. It took the Indians some little time to get to their horses and mount them, and the stage had gotten a good start in the race; but before half the distance to the station had been

covered, the arrows again commenced whistling past the driver and pelting the stage.

"Fortunately, the men who were on the inside knew how to use their guns, and although it was difficult to shoot with any degree of accuracy, on account of the rolling motion of the stage, they managed to hit one or two of the Indians, and that caused the redskins to fall back. They followed the



BIRD'S EYE VIEW OF SANTA FE FROM THE EAST MESA

stage almost to the station, however, and were in sight of it when the panting, foaming and almost exhausted ponies dashed into the big stage barn, the doors of which were closed behind the coach-load of thoroughly frightened passengers.

"The stage-station was by no means well garrisoned, and would hardly have withstood much of a

siege; but the Indians knew well enough that there were a few determined men there, and they knew also that to make an assault on the station meant the killing of some of their number. For some time they hovered about, apparently waiting for the stage to resume its journey. Not until after nightfall, however, and some time after the Indians had been seen riding away in an opposite direction, did the plucky stage-driver assure his passengers that it was safe to start again on their trip to Santa Fe, to which place he carried them in due time without any more thrilling adventures."

THE CITY OF SANTA FE

Leaving the main line at Lamy (named after a former Archbishop of New Mexico), a short ride brought us to the ancient city of Santa Fe. It is one of the most interesting cities of the United States, yet it is not so old as some people imagine. The oldest town in New Mexico is San Gabriel, now Chameta, between the Chama River and the Rio Grande. It was founded in 1598 by Juan de Oñate. Later, in 1605, the capital was moved from San Gabriel to Santa Fe, and the history of the latter city practically begins from this date.

There were two pueblos belonging to the Tanos Indians when the Spaniards arrived on this site, and several villages of Indians were found within a radius of ten or twelve miles. In 1617 there were only forty-eight colonists and soldiers in Santa Fe, and the Spanish population throughout the whole

country was necessarily very small. At first there seemed to be but little friction between the Indians and the newcomers; but in time the Spaniards became despotic and cruel, making exacting demands on the Indians, which were resented and in many cases refused. Then trouble began.

The Catholic Church was very active throughout New Mexico during this first century of Spanish occupation, and in 1630 all the pueblos had formally received Christianity and were under the sway of the Franciscan padres; and even as early as 1617 the records show that there were fourteen thousand Indians baptized, as many more ready for the rite, and eleven churches already built. These wonderful changes speedily antagonized the *caciques* and other religious leaders of the Indians, and, making the oppression of the Spaniards their theme, they were able to stir up considerable feeling against the newcomers. In Zuni, which we shall see later, two of the padres were murdered in 1630, and, in 1633, Padre Gutierez was poisoned by the Hopis. Another great source of discontent was found in the fact that the Spaniards did not protect the pueblo Indians from the cruel raids of the hostile nomad Indians,—the Apaches, Navahoes and Comanches,—as they had promised.

It was in the earliest days of Santa Fe's occupancy that the Old Palace was built, now occupied as the State Museum of Archeology and by the School of American Archeology. The date of its construction is variously set from 1598 to 1607. It was occupied by the Governors under the Spanish and

Mexican régimes, and was used as the Executive Palace in territorial days. In this old building a room is shown in which General Lew Wallace, who was then Governor of New Mexico, finished the writing of his fascinating novel, "Ben Hur."

The Plaza itself has been the scene of many interesting and historic events. Here Juan de Oñate

SANTA FE—THE GOVERNOR'S PALACE

camped and set up the banner of Spain in 1598. Here the Indians imprisoned the Spaniards during their rebellion of 1680, and when the latter were driven away, it was in this square that all the archives, records, church-furniture and paraphernalia were destroyed and burned by the exultant and triumphant Indians. On the other hand, it was here that these same Indians came in 1692 and humbled

themselves before De Vargas when he reconquered the country for the Spaniards. To merely recite the historic events that have occurred in this plaza would occupy far more pages than are contained in this book. The last scene under Mexican control was when General Kearny, in 1846, took formal possession for the United States.

SANTA FE, BOTH ANCIENT AND MODERN

It will be seen that Santa Fe, therefore, is both an ancient and modern city. Its present population is between nine and ten thousand, fully three-fourths of whom speak the Spanish language. Most of them also speak English. There are four Indian pueblos in Santa Fe County, namely: San Ildefonso, Tesuque, Nambe, and Pojoaque. The city occupies a most picturesque location in the heart of the Sangré de Cristo range of mountains, some of the peaks of which rise to a height of 12,500 feet within a comparatively short distance. From one of these peaks flows the Santa Fe River, rising in two lakelets near the snow-line, and furnishing the city with sparkling water from melted snow.

To the east lies the Pecos National Forest, of five hundred thousand acres, across which the Scenic Highway to Las Vegas, already referred to, is being built.

Within a comparatively short distance from the city are some of the most interesting Indian ruins and cliff-dwellings in the country, and these were deemed of such importance that we spent several days in visiting them, as will be later described.

THE MODERN CITY

THERE are a number of fine modern buildings in Santa Fe, as well as the older historic ones. The Women's Board of Trade is a pretty building, and

THE OLD SAN MIGUEL CHURCH, SANTA FE

the Capitol, the Federal building, several of the churches, colleges, theaters, stores, etc., are equal to those found in any modern progressive city.

One of the most interesting buildings is San Miguel church, built somewhere about the year 1600 and destroyed in the rebellion of 1680. Its adobe walls, however, were so strong that they withstood

the destroying fire so that they were used in the building when it was reconstructed in 1710. The attention of visitors is always called to the old bell in the rear of the auditorium, and also the altar painting, which is said to be very old. The adjoining cemetery is the oldest in the Southwest.

Within half an hour's walk of the Plaza are the

FEDERAL BUILDING, SANTA FE

ruins of old Fort Marcy. These ruins are on a hill 229 feet above the Plaza; and as there is a good wagon road to the top, it affords an agreeable drive, giving one a fine outlook over the city.

There are two Indian schools in Santa Fe, one conducted by the Sisters of the Holy Sacrament, the other being a Government Industrial Training school. The latter has over four hundred pupils, representing over a score of tribes. We visited both these schools and were much surprised to find that the Indian

students of corresponding ages were as well advanced in their studies as were the boys and girls of our own schools in Chicago. We had lunch at St. Catherine School, and were invited to dinner at the Government School, and it was with considerable interest that we sat down at the same table with some of the Indian boys and girls, laughing, talking and joking with those whose parents so strenuously opposed the coming of the white man into their territory.

Now that New Mexico has statehood, everybody with whom we came in contact expressed himself as certain that Santa Fe would progress with far greater rapidity than heretofore. Already much is being done to attract a larger citizenship, and it is expected that within the next decade Santa Fe will make more progress than it has done in the last hundred years.

In the Museum we saw a wonderful collection of artifacts and curiosities gathered from the pueblo ruins found in great profusion some thirty miles from Santa Fe.

TO THE PUEBLO RUINS

We were fortunate in meeting Professor Edgar L. Hewett, who has had charge of the American School of Archeology in Santa Fe since its founding, and to whose intelligent direction the excavation of the ruins is largely owing. After full consultation of Professor Young and Dr. James with Professor Hewett, it was decided that these ruins were of sufficient interest to justify our visiting them. Naturally my account must be a very incomplete and inadequate

one, and I can only refer to a few of the features that were particularly interesting to us. Automobiles were provided and we were soon whirling away over the mountains in a northwesterly direction from Santa Fe to the most extensive of the ancient "Cliff cities" of the Southwest. It is known as Puyé, and

THE INDIAN PUEBLO OF TESUQUE, N. M.

occupies an imposing situation on the Pajarito plateau.

We passed through the pueblo of Tesuque, and finally reached that of Santa Clara; but as each of these is very similar, in general appearance, to pueblos which we visited later, I shall not attempt to describe them here.

Professor Hewett, however, told us a most inter-

esting story of his "pow-wow" with the Indians of Santa Clara, who at first were bitterly opposed to any excavations taking place at Puyé. He explained to them the purposes of the excavations, and finally

CLIFF DWELLINGS AT PUYE, N. M.

won their hearty acquiescence in the proposition, after which they gave all the help they could to make them successful.

We found the rock of Puyé a mass of grayish-yellow tufa, about a mile long and varying in width

from ninety to seven hundred feet. This tufa has been much worn during the ages by water and wind erosion, so that it especially lent itself to the making of the cliff dwellings, which are one of the distinctive features of these ancient settlements.

There are two kinds of dwellings found here. The

INDIAN PICTOGRAPHS, NEW MEXICO

first type is a great quadrangle on the mesa top, an arrangement of four huge community houses, around a court, forming not only a capacious residence for a large population, but an effective fortified citadel. The second type are at the base of the cliff, where there are three kinds of dwellings, namely: 1. Simple excavated caves. 2. Excavated caves with open rooms

or porches built on in front. 3. Houses of stone, one to three stories high, and terraced, that rest upon the talus against the cliff.

At first glimpse the face of the cliff in which these dwellings have been excavated appears as if burrowing animals had made large caves for themselves beneath; while numberless holes and slots above suggest the presence of birds' nests to which these were the entrances.

We spent quite a little time under Professor Hewett's intelligent direction trying to reconstruct in our minds this wonderful city. The little glimpse we had of the pueblos of Tesuque and Santa Clara had prepared us as to the general style of pueblo Indian architecture. We saw the excavations of a great number of rooms, and were particularly interested in the *kivas,* or sacred ceremonial chambers where all the secret rites of these people were performed. We saw numbers of pictographs and symbolic decorations, and scores of stone implements; pottery in a more or less fragmentary condition, and other articles which revealed the state of culture to which these Indians had arrived. But after we had studied Puyé, we were amazed to learn that this was but one of several scores of such ruins, of greater or lesser interest, all of which are connected by a network of trails; which clearly indicates that at one time this whole country was a mass of pueblo Indian villages in which dwelt an extensive population. We walked over trails that were so worn, in some places, as to be hip-deep in the solid rock, showing how many thousands of feet had passed over them in the

time that had elapsed since the time when they were first laid out. Another interesting feature were the *navas,* or game-pit-traps, in which, as their name implies, the Indians caught their game.

After spending a delightful day climbing until we were tired, and enjoying the wonderful views that were presented from the top of the Puyé mesa, we returned to Santa Fe. On the return journey, Professor Hewett excited our interest in another group of ruins in and near the *Rito de Los Frijoles,* especially with his description of the Painted Cave, and the two carved mountain lions which stand in high relief above the bed-rock of the mesa. We begged so hard to be taken to see these that the next day we were taken out by way of the pueblo of Cochiti and thence to this treasure-land of historic wonders. If I had time and space I could well fill many pages in describing the wonderful and fascinating scenery that we saw on this trip. We people who live in the East have no conception of the entrancing character of these landscapes. We followed old trails and climbed over mesas which gave us pictures of supernal beauty. The air was so clear and pure that it seemed to intoxicate us and take away all weariness.

We visited the interesting ruins of Tyuonyi and then hastened to see the famous "Shrine of Mokatch." Here, among pinions and junipers, which have doubtless grown up since the shrine was established, we were shown a place that must be the American Stonehenge. Great slabs of rock standing on end made a rude enclosure in which we found the stone lions of our search. I shall not attempt

to explain the meaning of these lions in this place, as this will be found in the description of the hunting fetiches used by the Zuni Indians; but many of the fetiches of the Zunis are tiny little things that could easily be carried in a lady's purse, while these are life-size. They have suffered somewhat by the erosion of the centuries, yet they are still strikingly lifelike and real. The heads and shoulders have become almost indistinguishable, but the bodies and tails are still clear and distinct. The lions are in the crouching position always taken by these animals just before making their deadly spring.

What made the ancient inhabitants of this region carve these creatures, it is not now easy to tell, but it undoubtedly had something to do with the chase; for the mountain lion is the king of beasts of prey, and, as is explained about the Zuni fetiches, he is therefore the most important of all the objects to be consulted and propitiated when a hunter goes out after game.

We were delighted to learn that plaster casts of these figures had been made by Professor Frederick Starr, of the Chicago University, which are to be found in the Walker Museum. We have since visited them with great pleasure.

We did not visit the Painted Cave, as time would not allow, but we saw some interesting pictures which showed us the pictographs and strange Indian symbols painted upon its walls in red, white and black.

ALBUQUERQUE; THE COMMERCIAL CENTER OF NEW MEXICO

DELIGHTED beyond measure with what we had seen at Santa Fe, we left with a strange mixture of reluctance and impatience for Albuquerque. What a new world we were in! Everything was so strange and romantic, and the scenery such a commingling of

BIRD'S EYE VIEW ALBUQUERQUE, N. M.

picturesqueness and wildness—rugged grandeur competing with pastoral serenity to attract our attention so that our minds were in a state of constant excitation at the varied scenic and historic marvels presented to us.

We found Albuquerque more like our eastern cities than any place we had yet visited, although its close proximity to the grand and majestic mountains gives it a distinctly western appearance. We were told that this is the most progressive town of New Mexico, and we could readily believe it. We were installed in beautiful rooms at the great Mission hotel, the

THE ALVARADO MISSION HOTEL, ALBUQUERQUE, N. M.

Alvarado, which arrests the attention in the most striking fashion as soon as one leaves the train. It is a long, low building with rough gray walls, and arched colonnades. The roofs are of red tiles, and there are a number of quaint Mission towers reminding us of the Old Missions we had seen in California. Across the plains we saw the Sandia Mountains,

which some of the Indians regard with great veneration as being the "Sacred Turtle" of their mythology.

After dinner at the Alvarado, served in Fred Harvey's inimitable style, we spent the rest of the evening in visiting the museum of Indian works of art, etc., gathered together in this unique building.

COMMERCIAL CLUB, ALBUQUERQUE, N. M.

It is a most wonderful exhibition of Indian art-craft, and is a revelation to those who think of the Indian only as a rude and ignorant savage. We watched Elle of Ganado, the most noted weaver of the Navaho tribe, making one of her wonderful blankets, and we were able to understand something of the marvelous ability shown by these weavers as we watched her

six-year-old girl by her side do the same work. With instinctive genius, the little tot mentally constructs her own designs, and then, with a skill that could only have been acquired by centuries of heredity, she proceeds to weave the suggestions of her brain. Her blankets sell for a high price, and are eagerly sought for by collectors, not only because they are the work of a child, but because of their intrinsic value as fine specimens of Navaho weaving.

The next day we were taken around the city in automobiles by the president of the Commercial Club. We saw the wonderful lumber yard where hundreds of millions of feet of lumber were piled up, and when we saw the mills of the American Lumber Company and other firms, employing between three and four thousand men, and capable of turning out over a half million feet of lumber a day, we did not wonder at the immense area stacked up with lumber. We saw the largest wool-scouring plant in the West, where seven million pounds of wool are scoured annually, and numbers of manufacturing plants which clearly reveal that this western people do not intend to have all their manufacturing done in the East and pay tribute for it in the way of freight to the railroads.

The population of the city is in the neighborhood of twenty-five thousand, and its fifty miles of streets are well bound together with a good electric street car system. Many of its buildings are architecturally striking, especially those of the "University Pueblo." These are the two new dormitories of the New Mexico University, and are peculiarly appropriate for this

country, as they are built in imitation of pueblo houses. While they are furnished with steam heat, electric light and all modern conveniences, they have ancient Indian names,—the dormitory of the men being called Kwataka, meaning "man-eagle," and the women's, Hokona, or "maiden." These dormi-

ADMINISTRATION BUILDING, UNIVERSITY OF NEW MEXICO, ALBUQUERQUE, N. M.

tories are built around an extensive plaza, and it is the ultimate intention to erect other buildings in the same style, so that when completed it will be one of the most unique collections of modern university buildings in the world.

The altitude of Albuquerque is forty-nine hundred feet, and eighty-eight out of every hundred days

present a sky that is perfectly cloudless. The average rainfall is eight inches, less than one-half that of Los Angeles, California. But though there is so slight a rainfall, there is abundance of water for irrigation secured from the nearby mountains and from the Rio Grande river, which flows close by.

While the Albuquerque of today is practically a new town, being only twenty-five years old, its name comes down from the old Spanish days when the Duke of Albuquerque was one of the important factors in the Spanish rule of the new race. There is an "Old Albuquerque," and it is the county-seat of Bernalillo County. Though connected by street car with the modern city, and only ten minutes' ride away, it is not included in the city limits, but has its own independent organization.

The old Spanish city of Atrisco used to be located on the other side of the river, but when the Santa Fe Railway was built, the old city was practically abandoned when it was decided to locate a city on the eastern side of the river.

THE INDIAN SCHOOL

About a mile from the center of the city is the Government Indian School, with an enrollment of three hundred Indians, mostly Navahoes and Pueblos. The buildings stand within their own grounds, which comprise sixty acres, and there are shops for teaching plumbing, blacksmithing, carpentering, steam-fitting, and a number of other branches of industrial occupations. The girls are taught housework and domestic

science, including cooking and the cutting-out and making of their own clothes. The school has its own brass-band, and we were treated to a fine concert, as well as to an interesting drill by the students.

Albuquerque is a great railroad center, for here the three main lines of the Santa Fe system meet,—that from the east, that from the west, and the

U. S. INDIAN SCHOOL AT ALBUQUERQUE, N. M.

one that goes south to the Mexican line. We continued our journey on the Pacific branch.

THE PUEBLO OF ISLETA

It seemed that scarcely had we left Albuquerque and crossed the Rio Grande than we reached the Indian village of Isleta. Here we were courteously greeted by Father Docher, a cultured French priest who has long been the trusted friend and adviser of

these Indians. We spent a full day in visiting their homes, in seeing their beautiful orchards and fields, which they know how to irrigate to perfection and keep in first-class condition.

THE PUEBLO OF ISLETA, N. M.

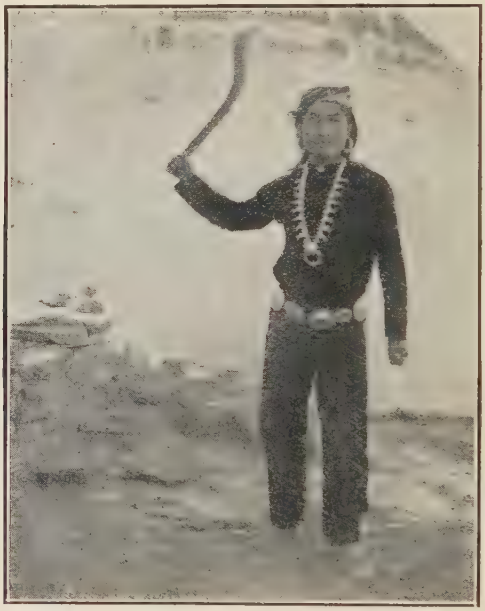
A RABBIT HUNT

Then, to our joy, a rabbit hunt was arranged for our especial pleasure, in the ancient style and with no other weapons than the old-fashioned "throwing-stick," which seems like an American representation of the Australian boomerang. It is a slightly curved, flat stick made of the gnarled and tough wood of the mesquite, pinion, or juniper, and about two feet long and an inch or an inch and a half broad.

It happened that the rabbits were very plentiful

at the time of our visit, and the Indians had about arranged for a hunt to take place. At the request of Father Docher they graciously consented to change their date so that we could witness the event.

To the south and west of the town extends an



PUEBLO INDIAN WITH THROWING STICK, READY FOR THE RABBIT HUNT

expansive plain, and on this the "round up" of the rabbits was to occur. It was late in the afternoon before we reached the spot from which we were to observe the hunt. We were on a slight elevation, which gave us a good view of the whole area. When everything was ready, the leader of the hunting party gave his instructions, and with considerable rapidity

a line of men, youths and boys was formed, stretching for a mile or more across the plain. Then the signal was given to advance. Knowing the habits of the rabbits, the hunters waited until late enough in the afternoon for the coming out of their prey to their evening meal. Now, steadily marching forward, but carefully watching, the actual "round up" began. Each man held in his hand his throwing-stick ready for action at a moment's notice, and every once in a while we would see it leave his hand with a speed that was remarkable. Generally a shout of triumph followed its flight, and in the distance we could see the game picked up and thrust under the belt of the hunter. As the line of hunters approached nearer to where we stood we saw quite a number of rabbits fleeing in the peculiar zigzag fashion in which they try to escape. But now another line of hunters swooped down upon them from another angle, and many of the scared little creatures were speedily slain and picked up. The remarkable thing about the hunt was the accuracy of the aim of the hunters with their throwing-sticks. They seemed to be able to calculate the distance between themselves and their prey and the speed at which the latter were running, and while to us it seemed impossible to guess which way the little creatures would dart in their frantic efforts to escape, the Indians seemed to know instinctively, and seldom missed their aim. As a result, it was a triumphant party that returned to the village that night.

Although we were tired on our return, we were almost as much interested in seeing the way the

rabbits were prepared for food as we had been in seeing them hunted. We were told that the Pueblo Indians will never fry a rabbit nor eat any part of one that has thus been cooked. The only way they prepare them is, after skinning and drawing them, to take their long ears and fix them into a kind of knot on the top of the head; then the hind legs are crossed and pinned behind the back, while the fore legs are twisted until the ankles lie snugly under the junction of the shoulder with the body. Thus prepared, they are either roasted in the open-air ovens, which I have described elsewhere, or stewed. Those that were brought to us were stewed in an underground oven. This oven was a plastered hole in the ground, protected by a little enclosure above ground, and with a stone slab which could be placed over the hole. A fire of wood was made in the hole, and when it was pretty well burned down, the jar in which the rabbit was placed, with a sufficiency of water to cook it, was lowered into the oven, the stone slab placed over it and plastered with mud so as to make it air-tight, and then left to cook. There is no denying that the dish was delicious, the gravy having been thickened by the addition of a little corn-meal which we had seen one of the girls grinding.

Isleta is a most interesting pueblo. It was located here when the Spaniards reached the country, going on four hundred years ago, and how much earlier it is impossible to tell. It was here that Mr. Charles F. Lummis lived for four years. He has written several most interesting books about this country, all of which should find a place in every school library in

the United States, and the reading of which is far more fascinating than most romances.

TO LAGUNA

Although there were many more things we still would have liked to see at Isleta, we left the next

THE PUEBLO OF LAGUNA, N. M.

morning for Laguna, at which point Dr. James assured us we should enter upon the most fascinating portion of our trip. We questioned whether anything could be more attractive and fascinating than what we had already seen, but he shook his head,

smiled, and bade us wait a while. On our arrival at Laguna we were most hospitably entertained, some of us in the home of Major George H. Pradt, and the others at the homes of the Marmon brothers, all of whom settled at Laguna many years ago, where they married Pueblo Indian wives and identified themselves with the people. They all have beautiful children who are well educated and who helped to make our visit most interesting, giving us many intimate glimpses of the home life of the people that otherwise we could not have obtained.

Laguna is so named from the *Laguna,* or lake, which is simply a natural excavation in the solid sandstone upon which the little village is built. Not far away runs the Rio San José, the small stream being named for the patron saint of Laguna. The rock upon which the pueblo stands is slightly elevated above the surrounding country, and the Santa Fe railway now winds around near its base, so that all travellers have a good view of the strange and picturesque dwellings of the town. Here are terraced-houses the same as those we saw at Santa Clara and Cochiti, which seem to be built of adobe but are not. They are constructed of small pieces of sandstone, found in large quantities on the tops of these disintegrating masses of rock, cemented together with mud, and then well plastered and whitewashed. The roofs are flat and made solid and strong enough to allow of their being used for actual out-of-door living purposes by those who occupy the story above them.

This town is not an old one, having been founded in July, 1699, when it was made a pueblo. Prior to

this time it had been merely a mission. The Indians own over 125,225 acres, mostly of desert land, granted to them by the Spanish Crown; and with pathetic industry they toil to raise squashes, melons, onions, and other vegetables, with a few peaches and apricots, in places where they can irrigate these lands, or where subsoil irrigation gives to them a reasonable expectation that crops will grow.

There are nineteen clans or families of which the people are composed, as follows: Bear, Sun, Badger, Eagle, Watersnake, Rattlesnake, Coyote, Yellow Corn and Red Corn, Water, Turkey, Wolf, Earth, Mountain Lion, Parrot, Turquoise, Chaparral Cock, Antelope, Lizard, and Oak.

According to Laguna traditions, the Bear, Eagle, Water, Turkey, and Corn clans, together with some members of the Coyote clan, came originally from Acoma; the Badger, Parrot, Chaparral Cock, and Antelope clans and some members of the Coyote clan came from Zuni; the Sun people originated probably from San Felipe; the Water, in Sia; the Rattlesnake, in Oraibi; the Wolf and Turquoise, in Sandia; the Earth clan in Jemez; while the Mountain Lion and Oak people claim to have come from Mount San Mateo. The Lizard clan is of unknown origin. It will be seen, therefore, that Laguna is a town of mixed nationalities, there being four distinct stocks represented, as well as all these different villages. These linguistic stocks are Keresan, Tanoan, Shoshonean, and Zunian.

In 1905 the population of the Laguna people was 1,384. It used to be the habit of this tribe to

occupy the single village of Laguna, going away during the summer months to their farms, scattered in several groups throughout the country; but in 1871, doubtless owing to the warnings given them that the white men might seize their farms if they did not continuously occupy them, they began to establish permanent homes at the former summer villages of Casa Blanca, Cubero, Hasatch, Paguate, Ensenil, Santa Ana, Paraje, Tsiama, and Puertecito, all of which are within a radius of fifteen or twenty miles. Paguate is the oldest and most popular of these summer villages, having a population of nearly four hundred.

At Laguna, or any of the summer villages, one may see the simple and primitive customs of these people. They plant their corn with a small planting stick, just as their ancestors did in the "Days of the Old," and they dig their rude irrigating ditches exactly the same as their forefathers did long centuries before they gathered together and formed this new town of Laguna.

They thresh their wheat in an interesting and picturesque fashion that reminds one of Bible days. In a large circular corral, formed of heavy tree-trunks, they spread the sheaves of ripened grain, having first thoroughly swept the ground clean. They then turn loose into the corral ten or a dozen head of horses, on the backs of two of which boys or young men are seated who drive the others around and around to trample out the grain. Every now and again, while going at full speed, the riders suddenly pull up their horses, turn them around, and thus

face the leaders of the trampling band. This is done so quickly that as the horses turn to run in the other direction they "scuffle" up the grain and thus make their trampling more effective. As soon as the trampling is done, the straw is thrown up in the air by means of pitchforks, so that all the grain may be

LAGUNA INDIANS THRESHING OUT WHEAT

dropped out, and in this way the straw is pretty thoroughly separated. The women then gather up the grain and chaff that remain, taking them to their houses, and there, when the wind blows sufficiently strong, they may be seen winnowing the chaff from the grain by the simple and most primitive method known. Spreading out a large sheet, on one side of which the mixed grain and chaff lie, the winnower

picks up a good-sized basketful, and, standing so as to best catch the wind, she gently pours out the grain from her basket. The wind carries away the chaff, while the heavier grain drops directly down upon the sheet. As soon as the grain-pile is large enough,

INTERIOR LAGUNA HOUSE, NEW MEXICO

she fills up her baskets, pottery bowls or sacks, and the grain is stored away for winter use.

We entered the houses of several of the Laguna people. The floors were all of adobe, packed solid by moccasined feet which for many years had trodden over them. While originally they had no chairs, bedsteads or other articles of furniture, as we understand the terms, always sitting and sleeping upon

the floor, many of them now have these modern conveniences.

To please us, however, and give us an idea of their primitive methods, our guide arranged with some of his old friends to have a dinner in the olden style. While this was being prepared, we wandered around, and when the hour arrived we were eager to partake of the aboriginal feast. When we entered the room, all the chairs, etc., had been removed and the food was spread out on the floor. There were no plates, for flat plaques and bowl-shaped baskets had been substituted for them. They had pottery bowls of their own manufacture, and some of the baskets were also used as bowls.

And what do you think we had for dinner? First of all, I must tell you how we all seated ourselves just as our three entertainers did,—two old women and one old man,—by squatting down on the ground. In a large room which adjoined the one in which we were to eat, suspended from the rafters by three strips of woven rawhide, were two long poles, over which were thrown numbers of native blankets, squaws' dresses, and dressed skins of coyotes, antelopes, deer, and bear. We were told that these were the "poles of the soft stuff" and that they served the same purpose as the bureaus of the whites. From these "poles of the soft stuff" skins and blankets were brought, upon which we sat, and it was with some interest and curiosity that we turned our attention to the meal.

Dr. James said they must have gone to a great deal of trouble to borrow from the neighbors the

beautiful baskets from which we ate. Each one had been thoroughly scrubbed clean, and as a concession to our civilized notions we were each provided with a spoon. The center dish was a large bowl filled with what I should call a mutton stew, though we afterwards found that there was some venison as well as mutton in it. The meat was cut up into small cubes, and there were potatoes, brown beans, onions, tomatoes and a good number of chili peppers. The dish was hot with these peppers, but we all agreed that it was as tasty a stew as we had even eaten in our lives. We were told not to indulge too freely in this, as another course was to come. It appeared that Dr. James had been peeking around and had found that a whole sheep was being cooked in our honor. And before it was brought in, he insisted upon our going to see the process of cooking.

Out of doors, or, as we should say, "right in the street," was the oven, a peculiar bee-hive or dome-shaped structure made of pieces of sandstone and adobe, and standing perhaps between three and five feet high. There was a fair-sized opening in front of it which could be closed up with a stone slab. On the top was a hole three or four inches in diameter, which acted as a chimney and which could likewise be closed up with a stone slab. It was explained to us that the oven was prepared by putting plenty of dry wood into it, which was fired and allowed to burn down. The ashes were then hastily withdrawn and the floor of the oven washed out with a rag fastened to a stick, exactly as a modern baker might do to his brick oven. The meat was then put in to roast, and

the aperture at the top closed with a piece of rock around which wet mud was placed; and the same thing was done with the slab at the doorway, thus practically making the oven air- and steam-tight. Close by was another oven in which bread was being baked.

In both cases the cooks must have been pretty good guessers to determine when the food was done, for, as far as I could see, they had no way of trying it, and yet the bread, biscuit and meat were perfectly cooked when they were set before us. Whether it was the novelty of eating with Indians, or that our appetites were sharpened, certain it is that I never tasted mutton that was any more appetizing than this; and, to our surprise, we were regaled with two side-dishes, both of which were delicious. One was corn on the cob, which had been roasted in the ashes, and the other was chunks of squash or pumpkin, which had been baked in the oven with the meat.

They gave us four different kinds of bread, and we were told that they were prepared by four different persons. First of all were the tortillas, which were made by simply mixing corn-meal with water, the dough being patted and stretched out until quite thin, and then baked on a hot slab. The second kind was very near to the ordinary hardtack one buys, though it was made of the flour of whole wheat, with the bran and everything else allowed to remain in, with a mixture of corn-meal and some of the wild grass seeds from which the Indians also make flour. While it was hard and solid, it was not quite so brittle as ship-biscuit, and seemed to me to be far more tasty.

We all enjoyed it so much that we each of us begged a good big piece to take away. The third kind was a bread we afterwards became familiar with at Zuni, where it was called *he-we,* and in the Hopi country, in which latter region it was called *pi-ki;* but I forget what it was called at Laguna. We were so much interested in it that they showed us how it was made. A mixture of corn-meal, white-flour and grass-seed

PUEBLO INDIAN WOMAN MAKING PI-KI

flour was mixed into a thin batter. Outside the house a large stone slab was resting in such a way that a fire could be built underneath it. This slab was as smooth and as well greased as any white cook's griddle, and we soon saw why. When the slab was quite hot, our hostess, after greasing it with a piece of mutton fat, dipped her fingers into the batter, and, with a motion as deft as it was rapid, passed them back and forth over the slab, dipping them now and again in the batter to bring up a fresh supply. Quicker than I have been able to write these words, the thin mixture was cooked into a sheet of wafer-

like thinness, which, before it had time to become brittle was folded over and over and over until it was about the size and thickness of a shredded wheat biscuit. We have since seen this wafer bread made in different colors, sometimes it was a pale green, or with a bluish tinge, sometimes a light brown and at other times with a pink tinge.

The fourth kind of bread was simply ordinary white bread made into cakes and small biscuits. We learned that it had been made for us by Annie Morton, a Laguna girl who had been well educated in the various Indian schools. She was an old friend of Dr. James, and seeing him at a distance and learning that we were to have a native feast, had sent this addition to our table.

We afterward met Annie and found her a most refined, cultivated, well educated and intelligent girl. Indeed, in her knowledge of the things that we ourselves were studying in the Chicago schools she was our superior. She had been the secretary, stenographer and typewriter for a gentleman in Southern California, by whom she was highly esteemed both for her character and ability. She was now home for a little holiday with her people, as once in a while there came over her a longing to visit with those of her own kin.

Our dessert was served with the rest of the dinner in little pottery bowls or saucers of home manufacture. It consisted of dried peaches sweetened with white man's sugar. In addition to this, we had coffee. It was not of a quality to brag much about and we afterwards learned that it was a brand much

used by the Indians. It was not genuine coffee, but a made-up mixture artificially molded into coffee-berry shape. It has a large sale in the west amongst the Indians, cowboys and miners.

Annie took us to the old church, a most interesting building, built the same as the houses, but more imposing in appearance. On the walls there were rude symbols of nature-worship which, to us,

THE OLD CHURCH AT LAGUNA, N. M.

seemed strange in a Roman Catholic church. But these matters were explained to us as follows. When the Spanish *padres* found that these Indians were nature-worshippers they explained to them that the Creator of Nature was God Almighty, as taught by the Roman Catholic church. They then sought to lead these savage minds to an understanding of God through the objects he had made—the sun, the moon, the stars, the milky-way, the thunder, the lightning,

the rain, the cyclone, the snow, etc. Thus the symbols of the nature worship of the Indians were turned into means of educating them into the white man's conception of God, so that they were allowed to be placed as decorations in the houses dedicated to His worship.

ON THE WAY TO ACOMA. THE ENCHANTED MESA IN THE DISTANCE.

TO THE ENCHANTED MESA AND ACOMA

At Laguna wagons and a few saddle-horses were provided for us and we turned our faces southward, across the little Rio San José, over the sand-hills to a region that we were told was one of the most picturesque and fascinating in all America. We were

going to see *Katzimo,* the Enchanted Mesa, and then Acoma, the City of the Clouds.

As we journeyed Dr. James discoursed to us as follows:

"Man has found many wonderful places for the sites of his towns and cities but nowhere more wonderful, picturesque and—from the modern standpoint—wholly impossible than in New Mexico and Arizona. The 'mesa' towns of the Hopi—perched high on almost inaccessible cliffs thrust out from a vast plateau into the heart of the desert, and the canyon deep home of the Havasusai, five thousand feet below the surrounding region, are types of these unique sites. Both types are reached only by trails that are the dread and despair of the 'tenderfoot,' the timid and the lazy, and both were doubtless chosen because of their very 'impossibility,' inaccessibility and comparative easiness of defense.

"By far the most picturesque of the mesa towns is Acoma, perched high on a wonderful 'penyol'—an island of rock, isolated, however, with sand instead of water—in the plain some twenty miles south of Laguna. When the Indians first went there it is impossible exactly to tell, but, whenever it was, it was at a time when defense was needed, easy, swift and sure. So they chose this site because there was no way to reach it save up a dizzy trail which climbed part of the way sheer up the face of the cliff, by hand and foot holes, in the heart of a cleft, cunningly hidden by nature and not easy for the stranger to find.

"According to tradition, for the Acomas have a

wonderful lore of stories of old days,—which, however, must not be confounded with their stories of the 'days of old,' the latter dealing with the times when their gods and mythical heroes alone dwelt on the earth—they came from the far-away north, and their first recorded village was Kashka-chuti. Here they dwelt for a long time until 'the urge' sent them further south to Washpashuka, where they remained until another southward impulse brought them to Kuchtya. The sites of none of these towns are known even to their oldest and wisest men. But, finally, they reached 'the land of the present'; the region every foot of which they know today as no one else knows it; the region of plain and mesa, of great, flat-topped, precipitous-sloped, talus-surrounded rocky tables of massive grandeur and impressive sublimity that the transcontinental traveler begins to notice more particularly when he strikes the little station of Bluewater on the main line of the Santa Fe railway. They dot New Mexico all over, also parts of Arizona, and nowhere are they more attractive and striking than in the region north and south of Laguna.

"When the traveling ancestors of the Acomas reached this land they reared the walls of Tsiame, at the gateway of a half canyon, afterwards named by the Spaniards, the Canyada de la Cruz. But, even here they did not linger long. A more attractive site was found at Tapitsiania, a great mesa overlooking the Acoma valley from the northwest. Still another change was made, and this was to Katzimo—the accursed—the mighty rock from which "Those Above"

drove them in most dramatic manner. Or, at least, they allowed them to leave and then forbade their return by making reascent impossible."

Dr. James had got this far in his story when we begged him to tell us all about Katzimo. He requested us to wait an hour or so when we should arrive at the rock generally known as *Katzimo;* called *La Mesa Encantada* by the Spaniards, or *The Enchanted Mesa* by the whites, and which was made the location of a wordy fight between white men almost as fierce as that which raged as to the identity of the author of the Letters of Junius.

"In the meantime," he continued, "the Acomas found a new home, and that is where they are today, where the army of Don Francisco Vasquez de Coronado found them in 1540, perched high on a picturesque mass of rock around which you can ride and see no possible means of ascent, and which has been the site of some of the hardest fighting—on a small scale—men ever indulged in."

AT THE ENCHANTED MESA

In less than two hours after leaving Laguna we were camped at the foot of Katzimo. All the way along we had been in a valley of cliffs, pink, gray, creamy, with occasionally a touch of orange, crimson and olive, but here was a detached mass: left solitary, alone, dignified, in the heart of the valley. It towered majestically above the tiny pinions at its base, though some masses of rocky talus were piled up quite high at the foot of the cliffs. The walls are

seamed and scarred with many a storm. The lightnings have cracked their fierce whips and the thunders have crashed and roared about them, and rain and snow, sleet and drizzle, sun and frost have gnawed on every hand, until towers and pinnacles, minarets and spires crown the rugged and scarred walls. To the north, from which direction we ap-

KATZIMO OR THE ENCHANTED MESA, NEAR ACOMA, N. M.

proached, a piled up mass of talus, leading up into a deep amphitheater, suggested to the boys that they could easily reach the top, and before the horses were unsaddled they were half way up, making the attempt. They found another amphitheater on the west side, but each was deceptive. The walls were steeper and higher than they seemed. We walked completely around it, and in no other place than these two was

there a possibility or hope of scaling so sheer a mass of rugged and precipitous wall.

THE STORY OF KATZIMO

After lunch we sat in the shade of a clump of pinions or junipers while Dr. James told us the following interesting story, which has twice been written for white readers, viz., by Charles F. Lummis in his "New Mexico David," and by Professor Frederick W. Hodge, Chief of the Bureau of American Ethnology.

"There are slight variations of this story, even as told by the Indians, for I have heard it at least half a dozen different times, but the main facts are as follows: Katzimo was even more difficult of access than Acoma, for there was but one trail to the summit, and that for part of the way was up a huge sliver of rock that had been separated from the main wall by the action of the weather during the centuries. Who would dare attack so impregnable a fortress? Indians had no guns, no cannon, no shell, no 'bombs bursting in air.' Their most dangerous weapons were stone axes, flint knives on sticks, bows and arrows and lances. None of these could be used from the foot of the cliff upon a brave defender of his home standing above, with a pile of heavy rocks at his side ready to be flung down. Here one man could hold an army at bay.

"But there had been no foes about for some time, so, on a certain evening the public herald stood on the given housetop and announced in his loud, stentorian

voice: 'O people of the white rock, Listen, Listen, for the words that I speak are those of command. They come from our father, the governor. It is time for the planting of the crops. Men, women and children shall assemble at sunrise and all shall go to the valley beneath, there to repair the irrigating ditches, pluck the weeds, plant the seeds that the corn, beans, cotton, squash, onions and other good things may grow for our next year's food.'

"None thought of disobeying the voice. All were there in the morning, for in a perfect republic as was this of Acoma, all found pleasure in working for the good of all. Then, too, there was to be fun as well as work. Races and other athletic sports were to be enjoyed. The fields were several miles away, near the San José river. The Indians were expert irrigators of the soil in a simple and primitive fashion, and they made a rude planting stick which they forced into the sand, and then dropped the seeds into the hole, scraped in loose sand enough to cover them up, then turned on the water long enough to give seeds and ground a good soaking and left the warm sun to do the rest. Here were no laggards, and no one was exempted—there were no privileged and no laboring classes,—all were privileged to labor and all counted labor a privilege. Boys and girls worked with their elders, carrying mud in blankets and baskets to help repair ditches, or build up dams with rocks and brush. Those who were not big enough for this work watched their baby brothers and sisters, so that the mammas could help.

"All were busily engaged. Only two or three sick

old women and a couple of boys were left behind on Katzimo, so full attention was given to the work in hand. Suddenly the heavens were darkened with clouds that came rolling up from the storm quarter. A heavy thunder storm was coming such as sometimes even to this day deluges the country with sudden floods. The growling of distant thunder was heard; then the flashes of lightning were seen; they came nearer, and at last it began to rain. First the drops came in large splotches. It was a quick shower and soon over. Then the sun came out. But it was only for a few minutes. Another volley of thunder and a glare of vivid lightning and down came the rain in torrents. The busy workers fled before its fury. They hid under the shelters of brush they had constructed, and some fled to the cliffs, where under overhanging rocks they found protection from the storm. In the distance Katzimo was wreathed in clouds, and now and again the lightning seemed to crown it with a halo of light. What a storm it was! How the rain poured down. Faster and faster it came until the storm became a flood. The Acomas, now thoroughly scared, fled to the top of the cliffs for refuge against the waters of the Rio San Jose, which by now had become a raging, roaring, turbulent river, such as few of them had ever seen in this generally quiet little valley. Then the flood became a deluge, and some of them thought the end of things had come.

"But even the worst of storms beat out their rage and fury in time and quiet down in spite of themselves. More suddenly than the heavens were dark-

ened were the clouds dispersed, and the Father Sun again resumed his imperious sway. Farming was impossible for awhile, at least, and so all hands returned to Katzimo. There it stood as majestic, as grand, as smiling as ever—for smiling it always seemd to be to the Acomas since they had established their home on its summit. Eager to return home they plodded through the streams and wet-soaked sands until they stood under the shadow of Katzimo. But here their footsteps were arrested. Whence came all this pile of rocks that barred their pathway? Looking up they saw, to their horror, that the great rock sliver, up which their trail to the summit of Katzimo had been pecked out, had *fallen,* and there was neither ascent nor descent possible.

"Now they understood to the full the wailing voices that they had heard from above. The sick ones there had learned of the disaster and were crying to be released; to be saved from the awful fate of desertion and starvation. But the Indian mind works peculiarly. The oriental mind calls the inevitable "kismet." There is not much difference between oriental aborigine and occidental aborigine. 'It is never safe to interfere with the will of Those Above.' Was not their will clearly expressed? The means of access was gone. Access was denied.

"Sorrowfully, but none the less determinedly the Acomas sought a new dwelling place and found it on the penyol to which we are now going, and only with bated breath ever refer to those who were 'lost and forgotten,' on the summit of 'Katzimo, the accursed.'

"Naturally all who read this legend were very

much interested, and among others was Professor William Libbey, of Princeton University. He deter-

PROFESSOR HODGE AND PARTY MAKING THE ASCENT OF THE MESA ENCANTADA, N. M.

mined, if possible, to scale the cliff, and as the story he had read spoke of absolutely inaccessible walls, he wasted no time in small endeavor, but secured a com-

plete sea life-saving apparatus, with cannon for firing a rocket, to which a line could be attached, clear over the mesa.

"In July, 1897, he succeeded in reaching the summit in a boatswain's chair, hauled up on a life-line, and after spending three hours on the summit failed to find anything 'that indicated even a former visit by human beings.'

"When the reports of his expedition were read by Mr. Lummis, they caused great excitement and indignation and a controversy was started that was neither dignified, scientific nor gentlemanly. But in September of the same year Professor Hodge decided to make the ascent, accompanied by Major George H. Pradt, for thirty years a civil engineer in New Mexico, Mr. A. C. Vroman, of Pasadena, Calif., and Mr. H. C. Hoyt, of Chicago, and accomplished the feat with no other assistance than a few lengths of ladder and some coils of stout rope.

"This party found, as had Mr. Hodge in 1895, in the great western cove of the cliff, the remnants of an old and deeply worn trail, and also several pieces of pottery, two pieces of stone axes, and a portion of a shell bracelet. A small cairn, evidently piled up with human hands as a monument was also found. These were all clear evidences of human presence and Professor Hodge, then descending and again carefully examining the mass of talus at the foot of the cliffs —which in one place is piled up 224 feet above the level of the plain—and finding therein much broken pottery, etc., came to the conclusion that the tradition was clearly vindicated. And as such it is generally

regarded by most of the scientific students of the country today."

Dr. James, however, says he should be willing to accept this decision were it not for several things that the Acomas have told him. These are to the effect that the elders have purposely misled strangers as to the location of Katzimo; that while the tradition

ROCKY WALLS NEAR THE ACOMA TRAIL, N. M.

as told is correct, in the main, they have not desired that white men should find the spot, and that it is elsewhere, and that, some day, they will take him and show him the "real" Katzimo upon which there are still plenty of ruins to clearly demonstrate that a large village once occupied its commanding site. In talking about this matter Dr. James said it was per-

fectly possible that his informants might have been in error, but that until we have studied the country far more than we have he does not see that it is necessary to settle the question in favor of one site or another.

THE ASCENT OF THE ACOMA TRAIL

It was late in the afternoon when we reached the foot of the mesa at Acoma. While when the white men

A STREET IN THE PUEBLO OF ACOMA, N. M.

first saw it there was only one trail to the summit, Dr. James said there were now four—all of which we afterwards went up and down. This time we were to go up not the steepest and most dangerous, but one that made us all wonder what we should possibly do when we came to the one that was really danger-

ous. But long before our horses had come to a standstill half a dozen young men, one old one, and several children were hailing our guide as an old friend. He jumped from his horse and greeted them with evident delight, and then arms around shoulders they walked along, chatting and laughing with evident merriment.

THE OLD CHURCH AT ACOMA, N. M. THE TOWERS HAVE BEEN RECENTLY RESTORED

At the foot of the trail our horses were unharnessed and unsaddled, and taken away by some of the Acomas. It was strange that none of us had the slightest fear. We seemed to be with old friends, instead of with the wild Indians we had read about, and the story of whose determined resistance of the white men Dr. James had already outlined to us.

Now all our valises, bags, provisions, bedding, cameras and everything were piled up. Those pieces which were easily carriable by hand were put aside, and all the rest dumped into several stout blankets, the corners of which were tied together, and speedily hoisted upon the sturdy backs of our new Indian friends. They went ahead of us and we soon saw them scaling an absolutely precipitous cliff—in the heart of a cleft—like flies on a wall. It made our hearts stand still. Did we have to follow?

We soon found we did. But it was so planned that there was some friendly hand to help each of us at the critical places. First of all the trail was a series of steps of rock and tree trunks until we were well up in the heart of the cleft, then our fingers were guided into little hand holes and our feet put into foot-holes and for about ten feet we had to climb up a sheer wall. But we were helped so handily and so surely that we all reached the top with no more than a few extra heart beats and a sharp sigh or two. Then we entered a rocky tunnel and on emerging on the other side we were actually on the top of the mesa on which stands Acoma. Yes! there was the rear of the old church; there was the priest's house; there the governor's; there the grave-yard, and here the house where we were to make our home so long as we stayed. Our host was Lorenzo, the governor, and his wife was a fine-looking, stout, motherly woman with a bronzed face, but kindly looking and with eyes that smiled a loving welcome to us and made us feel at home at once. And their daughter, Lolita, all fell in love with at sight—girls and boys alike—

and I believe Professor and Mrs. Young and Dr. James were smitten as badly as we were. Indeed, the latter afterwards confessed that Lolita had won his heart years ago, when he first came to Acoma and stopped at her father's house. She was a little tot then, but, said he, she becomes more winning as she grows older.

THE GOVERNOR AND HIS STAFF AT ACOMA, N. M. (ON THE STEPS OF THE OLD CHURCH)

THE PUEBLO OF ACOMA

We could not wait for supper before we had made a hasty survey of the village, and we saw so much and heard so much that it was as hard work to sleep up here as it had been the night before at the foot of Katzimo.

The next day we learned the history of Acoma as

far as it is known since its people were discovered by Coronado in 1540. We were reminded of that unfortunate expedition of Panfilo de Narvaez to Florida which resulted in the wreck and loss of every vessel and of the death of every man save five who, led by Cabeza de Vaca, after numerous wild and strange adventures, traversed the whole continent and reached the Spanish settlements in Northern Mexico eight years after they were supposed to have been dead. In his wanderings Cabeza had heard of seven strange and wonderful cities where, he was informed, vast wealth was to be obtained. The viceroy, Mendoza, sent out a keen and wise observer, Marcos de Niza, to make a general reconnaisance of the country, before he allowed a large and elaborate expedition to enter for the purpose of its subjugation to the crown of Spain. We shall later see the very hill—near Zuni—to which the indefatigable Marcos came, and "viewed the landscape o'er," not daring to enter the village itself, lest like his advance messenger, the negro Stephen, he be slain. So he secretly surveyed Zuni and then returned with a glowing and enthusiastic account of the wonders of the country he had passed through and the remarkable Indian cities he had seen. Then the expedition was allowed to proceed, and what a gallant band, and extra gallant leaders it had, and its commander and chief was most gallant of all. Don Francisco Vasquez de Coronado was a cousin, by marriage, of the proud Emperor of Spain, Charles V, and his mother-in-law had given him a wedding gift that made Cortez complain—its income was so great. Hence there was nothing nig-

gardly in the equipment of the expedition. There were three hundred Spaniards and eight hundred natives of New Spain gathered together—1,100 in all. Castañeda, the historian of the expedition, says that "such a noble body was never collected in the Indies."

They had adventures enough before they reached Zuni, and here Coronado was wounded, so he sent Hernando de Alvarado with twenty men to investigate the rumors that were rife about remarkable cities to be found Eastward. In five days after leaving Zuni, Alvarado gazed on Acoma—the first white man ever dazzled by its peerless situation. Never since has an intelligent being stood at the base of those cliffs without experiencing deep and uncontrollable emotions. Castañeda, in a few words stated that Acoma is situated upon "a perpendicular rock," and that the only way to reach the summit was by means of a stairway of three hundred steps, hewn out of the solid rock.

We climbed down that stairway—and we were told it was a great honor to be allowed even to know of its location, and then, though the weather was warm, we walked completely around the great mesa. We enjoyed as much as our limited time would admit the rocky sculpturings and the striking mural faces it presents. All around, it is inaccessible, impregnable, except where the four trails constructed by the Quéres have made its ascent possible. Towers, buttresses, battlements, bridges innumerable stand in conscious majesty as Nature's guards to the home of this quiet and peaceful people.

And yet not in Coronado's day, but later, it saw many and dreadful scenes of bloodshed. For, fifty-eight years after Alvarado's advent, and long after Coronado and his expedition had returned, disheartened and discredited, to Old Mexico, Juan de Oñate, the real conqueror of Arizona and New Mexico, came to receive anew the submission of the people of this "City of the Cliffs." Treachery was in the hearts of the *principales* when they solemnly pledged themselves to be true and submissive vassals to the crown of Spain. They were diplomats of an early American era. To them, the end justified the means, and lies and treachery were legitimate weapons in dealing with hostile forces of such overwhelming power.

Having subscribed to the oath, the Acomas invited Juan de Oñate to climb the steep and perilous trails and visit the city whose submission he had received. After gazing upon its scenes of interest, he was taken to the head of a ladder, which led into the depths of one of the underground ceremonial chambers, termed kivas by the Indians, but named *estufas,* or stoves, by the Spaniards, on account of their stifling heat. Would he go below and see the ceremonial chamber? Just as he was about to descend, the darkness below sent a shaft of suspicion into his fearless heart, and he refused to go. Well for him it was that he let prudence control his acts at that time; for, in the darkness of the kiva a score or more of armed warriors were stealthily in waiting, watching for his steps upon the ladder, and, ere he reached the bottom, a score of willing hands would have been dyed in his life blood, while armed men

above would ruthlessly have murdered his little band of followers.

A few weeks later Oñate's maestro de campo, Juan de Zaldivar, who had been exploring eastward, came to Acoma with thirty men, and, lured by the peaceful protestations of the Acomas, left fourteen of them below to guard the horses, and then, with sixteen men, climbed the trail. With quiet stealth and under most friendly guise, Zaldivar and his men were scattered, when suddenly, like the whirling cyclone from the heavens above, all the warriors of the town fell upon the hapless Spaniards with flint knives, stone battle axes, heavy hammers, bows and arrows, and war clubs. Surprised, apart, unready, these adventurous warriors, who had braved the savages of thousands of miles of desert marches, one by one were slain. Here would be seen a desperate but hopeless conflict; a mailed warrior, back to wall, blood streaming through his broken helmet, surrounded by yelling, screeching, howling, naked savages, all attacking at once and with a ferocity altogether irresistible. Juan was slain, others of his officers and men, one by one, licked the barren rock in the agonies of death, and, at last, five soldiers only remained. Fortunately, they were able to get together, and thus, side by side, encouraging each other, they fought, striking and thrusting at every good opportunity into the dusky mass of surging savagery which determinedly forced itself upon them. Back, foot by foot, they were driven. Step by step they came nearer to the edge of those frightful cliffs. Yet death at the foot of a yawning precipice was preferable to cap-

tivity, torture, and horrible death at the hands of ruthless savages; so, cheering each other with brave words, these daring and desperate men flung themselves over the brink and commended their bodies and souls to Santiago, the patron saint of Spain. Courage and bravery were rewarded in all but one, who, falling on the solid rocks, was dashed to pieces. The other four, fortunately, breaking their fall on the soft, ever-changing sand heaps, escaped with their lives, and were soon in the helpful and soothing care of their comrades. The fear of their horses kept the camp below from the attacks they dreaded, and, just as soon as the wounded soldiers were able to travel, the little, sad-hearted band hastily set forth, some for the main army of Juan de Oñate, at San Gabriel de los Caballeros, the second city founded on United States territory, and others to give warning to the scattered Spaniards at Zuni, Hopi and elsewhere to gather together at San Gabriel for mutual protection.

When Oñate heard the news, a determination for vengeance fired his soul. With seventy men he sent Zaldivar's brother, Vicente, to make his vengeful anger felt upon the Acomas. The storming of that hitherto impregnable citadel is a story that stirs the blood. For three days and nights the battle raged. Deeds of daring and heroism were performed that well deserve to become famed. Step by step the ascent was made; blood was shed like water, scores of Indians lost their lives, and still the fight continued. But determined to avenge their comrades' treacherous murder, the soldiers of Vicente fought with a quiet, desperate valor that could know no defeat.

There was but one alternative to victory, and that was death.

At last the rock itself was gained; then the town must be stormed. The one howitzer they had brought was put into use and the adobe walls blown down; fire aided the attacking forces, and at last the chief warriors sued for peace and offered to surrender. Dearly was Juan de Zaldivar slain, for it cost the Acomas the greater portion of their fighting men.

For many years after this the Acomas were peaceful until the rebellion of Popé, which took in all New Mexico in 1680, when the Spaniards were entirely driven out of New Mexico and kept at bay for nearly eighteen years. This is such an interesting story that a whole chapter is devoted elsewhere to it. Then Diego de Vargas, the daring Spanish cavalier, came as the reconqueror, and more scenes of battle and bloodshed were witnessed, until the Indians were finally subjugated.

And here we were, perched high on this isolated rock, a tiny handful of white people, practically without weapons, among the descendants of these determined warriors, and yet not one of us had a fear. Time had kindly changed the hearts of the Acomas towards the whites, and they met us and entertained us with a hospitality as genuine and complete as their hostility in former days had been determined and persistent.

In the morning we began our explorations. The superficial area of this rocky table of Acoma is seventy acres, and it is perched nearly 360 feet high above the plain. But how inadequate words are to

picture the rugged grandeurs and wierd attractiveness of the rock and its surroundings. The walls are carved into a thousand and one forms; strange, fantastic, top-heavy statues of rude and grotesque outline, suggesting monstrous griffons and dragons after the hideous gargoyles of European cathedrals; narrow clefts, ravines, chasms, in which are hidden standing rocks, balanced rocks, pillar rocks, and some of which are spanned by natural bridges of massive outline, that dwarf into insignificance the most ponderous of man's efforts in this line. It is a veritable *tum-pin nu-wear, too-weep,* "land of the standing rocks," and there are scores of massive mural faces, the tops of which are nature-shaped into towers, pinnacles, columns, domes, minarets and rude spires. We saw sheep corrals made by fencing in the entrance of a *cul-de-sac,* whose walls towered hundreds of feet into the blue sky. Nearby was another made by surrounding a standing rock-pillar with a fence, which, just at sunset, cast a shadow upon the sand strangely and startlingly like a sleeping giant of unearthly proportion.

We went all around and over the wonderful old church—how wonderful who can describe—that Mr. Lummis says "covers more ground than any modern cathedral in the United States." It is a great adobe building, with two towers in which hang bells brought from far-away Peru. The walls are sixty feet high and ten feet through, and in the roof are solid timbers fourteen inches square and forty feet long which span the building from wall to wall. These were chopped down in the mountain forest twenty miles

away, and after being hewed into their present shape, were dragged by sheer man-muscle to Acoma and hauled up the cliff to their present position. The grave yard is pathetic beyond measure, not only in the feature it holds in common with all burial places of the loved dead, but because of its remarkable building. It is a graveyard that was actually built by the patient labor of many, many women, working as the slave Hebrews did under the lash of the Egyptians. It is two hundred feet square, and on two of its sides had to be "walled up" from the eroded rock, in some places for forty feet. Thus a huge stone box was made in which the earth was to be placed, and every pound of this earth was either scraped up from some other part of the mesa top and carried here in blankets on the backs of the patient women, or, harder still, was gathered from the plain beneath and with toilsome labor carried up the dizzy trail and then deposited. We do not wonder that it took forty years to fill up this great hole.

Before we reached the church, however, Dr. James had had an interesting experience with the Governor and the *principales*. For some time he had wanted to secure a photograph of them, which they had been unwilling to allow. He knew that on this particular morning they were all coming to early morning mass, and that led him to think of a plan that would secure what he wanted. Said he: "I was out bright and early, my scheme all ready for action. After making a picture of the church, I planted the camera directly opposite the steps, focusing on them, setting the shutter, drawing the slide from before the plate, and see-

ing that all was ready for the mere pressing of the bulb. I had prepared myself with plenty of tobacco, cigarette papers, candy and my pocket microscope. Then I waited.

"Soon my patience was rewarded. The governor and several of his devout staff appeared, ready for the mass, which custom required them to attend. The priest, however, was a little late in arriving, so, with tobacco as a lure, they were easily persuaded to take seats with me on the steps. They eyed the camera rather suspiciously, but, as I paid no attention to it, and handed out two or three sacks of tobacco and bade them smoke, and then began to chat, their suspicions were soon appeased.

"Then, taking out my microscope, I lighted the governor's cigarette with it. This was wonderful. Then I held his hand and let the 'burning glass' get in its work. This amused him, and, putting his fingers to his lips, for silence, he suggested I burn Luis and then all the rest. When this was done, they were pretty well contented, and while they were still in the enjoyment of the fun I carelessly sauntered to the camera, and, without looking towards them, pressed the bulb and made their picture. Though I did not look, I felt and heard their motions of surprise and astonishment at hearing the camera 'click,' and remembering the old saying that one might 'as well be hanged for a sheep as a lamb,' I determined to go in for a whole flock. So, hastily putting in the slide, reversing the plate, and setting the shutter, I made another exposure—all within a few seconds—and a second picture was the result."

THE COMING OF ST. JAMES TO SPAIN

With all his sturdiness of character, stolidity of demeanor and evident seriousness, the Indian is strangely childlike in many ways. In nothing is this more manifest than in his love for dramatic shows. Every clan has its own religious ceremonies most of which are conducted in secrecy in the underground *kivas*. Comparatively few of these ceremonies have ever been seen by white men, and very few have been described. Many of them are old and have been handed down from such a far-away time that the meaning of some of the words used in them have been completely forgotten.

The Spaniards found many such ceremonies in existence when they first subjugated these people. With a wisdom as shrewd as it was kindly, they took them and lopped off a little here, a little there, and added thereto a few new features, thus giving them a Christian appearance. They then named them as fiestas after the saints, so that they became peculiar mixtures of the old and the new, offended nobody and practically pleased all concerned.

One of these changed-over ceremonies we were to witness that morning. It was to be a dramatic representation of the coming of Santiago—St. James—the national saint of the Spaniards, to Spain.

Long before we had breakfast we could feel that something exciting was in the air. The men were decked in their finest costumes, and the women were still arraying themselves in their most gaudy apparel. Bands of horses had been clattering up and down

the naturally stone-paved streets for hours and the noise had awakened us in the early morning. Soon after breakfast we were all drawn, as by a magnet, to one spot on the mesa top. It was near the head of the trail which had been built up by the drifting sands on the northeast face of the cliff. Every eye that knew what to expect was gazing off in the far-away distance where pinions and junipers hid the sandy soil. Soon two young men on fiery broncos came dashing up as if they were messengers of importance. Riding as far as it was possible up the steep trail, and greeted on every hand by buzzing tongues, they came to the governor and *principales* who awaited them in a dignified group near the head of the trail. There they announced the fact that Saint James was on his way to Acoma and would soon arrive. Though no public announcement of what the messengers had said was made, everybody seemed to understand and every gaze became more fixed and insistent than before. Soon the quaintest and queerest little figure that was ever seen appeared among the trees on the plain surrounded by a hundred horsemen, not riding sedately and soberly, but all in a hurry of bustle and excitement. Single horsemen and groups darted off, like the wind, in every direction on apparently aimless errands and came back with equally aimless speed. They were messengers sent out by the saint to inform the people along the way of his arrival. For that comical little figure, which at first we could make nothing of, at last came near enough for us clearly to see what it was. It was a man riding some kind of a figure draped in white with a small horse's-

head, neck, mane, back and tail attached to him, which he made to prance and cavort around in a series of fantastic movements that were as interesting as the movements of the great Chinese dragon of San Francisco. This was Santiago himself.

When the foot of the sand trail was reached, the couriers of Saint James dismounted from their horses, which they left there in charge of one of their number, and then, solemnly and with reverence, they formed as a body-guard around the peculiar figure which continued his prancings and curvetings and accompanied him up the trail to the mesa top. Here he was received with the greatest respect and marks of veneration by the governor and the other town officials, and with deep and earnest, but nevertheless hearty cordiality, by the people. After a few minutes spent in exchange of salutations, the whole party wended its way towards the church. Here mass was performed by Father Juillard, in which he was assisted by Lorenzo, our host, and two Indian boys as acolytes, after which a short sermon was delivered telling the story of Saint James' coming to Spain, and at the same time giving the history of San Esteban (Saint Stephen) who is now the patron saint of the Acomas.

We of the white race, who call ourselves "civilized," were more than pleased,—we were both surprised and amazed at the decorous silence and reverence manifested by all the worshippers. There was not one whisper during the whole ceremony, and no wandering eye gaping about revealing lack of interest in what was going on. During the service I caught

a glimpse of a group of young men standing near the door, their wrapt expression of profound interest revealing how deeply they were impressed by that which their eloquent priest was telling them.

THE FIESTA OF SAN ESTEBAN

As soon as the service was over, a procession was formed, different from any procession I ever saw before, and yet in some features it was similar to ordinary Catholic processions. First of all came the peculiar little figure of Saint James riding his sham horse. Then, more peculiar even than Saint James, was a tall Mexican, dressed in cowboy fashion, with wide-spreading sombrero on his head and jingling spurs on his heels, wielding a large accordion and playing with earnestness and vigor. By his side was another Mexican. This latter had evidently taken full charge of the ceremonies. His wand of office was a vicious-looking blacksnake whip with which every now and again he fiercely beat the air. Then followed a large crowd of Mexican visitors,—men, women and children, all decked in their festival finery, who every year come to participate in this festival at Acoma. Now came a stalwart Acoma Indian bearing the processional cross, then the Governor and his officers, followed by the priest in his robes of office. Behind him, seated in a cabinet evidently made for the purpose and borne aloft over the heads of the bearers, was the wooden figure of Saint Stephen, taken down from its place on the altar. Over the figure of the saint a cloth canopy was held, the four corners of

which were supported by staffs in the hands of four men. Then came the band of singers and the whole of the population, men, women and children. This procession solemnly wended its way up and down every street of the pueblo.

Dr. James was busy photographing all the time and succeeded in getting a number of most interesting photographs. Following him, we were able to get in advance of the procession several times and thus have it pass us again and again in interesting review. At one time, while we were waiting its coming down the street at the corner of which we were standing, we were amazed to hear the accordion strike up with a good deal of fervor and vigor one of the popular dance-tunes which shortly before had been ground out from every hand-organ and mechanical-piano on the streets of our eastern cities. To us the effect seemed funny and incongruous in the highest, but the Mexicans and Indians heard in it nothing strange or peculiar and received the suggestive strains of the dance-tune with as much solemnity as if it had been the staidest hymn-tune ever written.

In one of the main streets a small *ramada* or shelter had been built. It was constructed of poles, artistically and prettily covered with branches of beautiful green trees,—cottonwood, quaking aspen, pinion and juniper. Inside this *ramada* the figure of St. Stephen was placed, forming part of the rude altar which had already been prepared. Having thus escorted the figure of the saint to his shrine for the day, the procession now disbanded. The priest retired and took his long delayed breakfast, for of course no priest is

allowed to partake of food until after the mass has been celebrated, while the governor and *principales* sat down inside the bower, guarding the figure of the saint, and at the same time officially showing their respect for the ceremonies of the day. The proces-

THE DANCE AT ACOMA, THE SINGING CHORUS IS SEEN TO THE LEFT

sional cross was held outside by one of the sturdy young men and on the other side of the bower stood another young Indian bearing a loaded gun, as if to ward off all intruders.

During the rest of the morning all the devout members of the tribe, men and women, came to pray at the little shrine, each one bringing some gift-offering of bread, baked-meat, clothing, pottery, corn,

melons, jewelry, or other article, all of which were deposited around the foot of the altar and left there. In the mean time Santiago must have retired to refresh himself. Anyhow, he disappeared for a time, after which he returned at intervals always accompanied by the Mexican *major-domo* with the heavy rawhide whip.

Soon after the noon hour the dances began and it required no explanation to see that these were a remnant of the old heathen part of the ceremonies upon which the civilized and Christian part had been grafted. The head-dresses of the women clearly symbolized the old time Acoma worship of the Sun, and Dr. James told us that the other symbols and the words of the songs which were sung showed that some of the dances were the ancient thanksgiving dances for the good things the people had received at the hands of Those Above, and also a prayer for rain. He showed us the symbols of the rainbow, the clouds, falling-rain, the planted corn, the same as the first blade sprang from the earth and its final ripe condition. The men wore a kilt, or apron, reaching from the loin to knees, embroidered and fringed garters and moccasins. Dependent from the loins at the back was the skin of the silver gray fox, and around both arms above the elbow were tied twigs of juniper or pine. In the left hand more twigs were held, while in the right was the whitewashed gourd-rattle used in all ceremonial dances. Around each forehead was the inevitable handkerchief, and nearly all wore a shell and turquoise necklace. Their bodies and legs were nude, painted with an oxide of iron. The women

on the other hand were bedecked with all the gorgeous finery they could muster. *Jotsitz* (robe), girdle, moccasins, leggings, necklaces, etc., that were too good for common use, or were especially made for this great occasion, were donned, and in addition, the peculiar symbolic headdress made of board or rawhide which I have already described. To and fro they danced, the men two together, giving the singular hippety-hop movement peculiar to Indian dances, and shaking their rattles, the women, likewise in twos, following in alternate order, gently waving bunches of wild flowers, and shuffling forward with their feet as the men hopped. On the other side of the street stood the *tombés*—drums—and the chorus, the leader occasionally making gestures, all of which were imitated by the singers, expressive of their thankfulness to "Those Above."

The dancing was done in relays, as it is no easy thing to keep up the strenuous and vigorous stepping of the Indian dances in the broiling hot sun for long at a time. Only those who have tried the peculiar step of the Indian dances know what hard work it is and how difficult. The time is kept by a statuesque old man whose wrinkled face shows that he has participated in these festivals for many generations. The *tombé* is a wonderful old instrument, made perhaps six or seven centuries ago, by hollowing out a section of the solid trunk of a tree with the rude flint knife of the ancients. The two ends were then covered with green rawhide on which some of the hair was still allowed to remain, which were then laced together with green rawhide thongs. When these be-

came dry they pulled the two drum-heads as taut as if they were stretched by the most approved methods of modern instrument makers.

Tum, tum, tum, beat the drums, all in perfect time. Altogether as if they were controlled by machinery, each man-dancer raises his right foot with a quick jerk to the height of eight or ten inches above the ground. The next moment, but all in time, he gives a tiny hitch forward or hop with his left foot, while the right foot is suspended in the air. Then bringing the right foot down, he lifts his left foot with the same quick jerk, following the movement with the tiny hop of the right foot. It is this little and almost imperceptible hop, following the main step, that gives the peculiar character to the Indian's dances. As the afternoon progressed and the fervor of the dancers increased, the step became higher and more vigorous and the little hitch of the other foot more marked. To dance such dances the Indians must need be athletes, as no others could possibly endure the physical labor for any length of time.

THE STORY OF A "CIVILIZED" INDIAN

Our attention was particularly called to one young man who was apparently the most earnest and sincere dancer of them all. No one else lifted his feet as high as did he. No one gave the syncopated movement of the other foot so markedly as he. One would have thought he was the most devout, if the fervor of his dancing was any guide. While we were watching him, he looked up and caught the eye of Dr. James.

A peculiar smile came over his face, and the next moment, darting a flashing glance around to see whether he was observed or not, his smile deepened into a broad grin, and then he gave a most decided wink to the doctor, at the same time, with a rapid glance to his feet, evidently calling attention to his emphatic dancing.

We learned that he had been a student at the celebrated government school at Carlisle, Pa., and other Indian schools, where he had been taught the "white man's ways." He had learned that the dances of his people were heathen ceremonies, full of foolish superstition, and that civilization deemed such exhibitions altogether unnecessary and unworthy of an intelligent and progressive people. After several years of our kind of education the boy returned, as a young man, to the home of his forefathers. He was thoroughly convinced of all his teachers had taught him and as he was of a brave and fearless type he did not hesitate to say so. Consequently when the next religious dances were held, he not only refused to participate in them, but openly and strongly condemned them as remnants of the foolish superstitions of his ancestors. He even openly made fun of those who did dance and loudly laughed and jeered when he was told that the vengeance of the ancient gods of the Acomas would fall upon him.

That night he was awakened out of a sound sleep to find himself in the hands of a dozen strong men, who gagged him, tied him hand and foot, and carried him down into one of the underground *kivas*. Here, sitting in a solemn conclave, were the governor and

all of the *principales* and the *shamans* (or priests) of the various religious organizations of the Acomas. Trussed up like a dressed fowl, the now frightened youth was deposited in the center of the chamber, whose darkness was made only a little more noticeable by the dim light that came from the few coals on the center hearth. Solemnly and silently the old men smoked their cigarettes, as if meditating upon some important theme. The silence became more and more impressive. A half hour of it put a strange and sickening fear into the heart of the educated and civilized Indian. His teachers had not said anything about the possibility of anyone objecting to his change of opinion and his free expressions in regard to that change. It began to dawn upon him that his actions had not met with universal approval.

Suddenly at a sign from the Governor, his bands were loosed and the gag removed from his mouth. The oldest medicine man then proceeded in a very calm but exceedingly impressive manner to inform him "that his irreverent words and conduct had not only deeply wounded the religious sentiments of the Acoma people, but if allowed to go unpunished, would bring upon the town and its people some severe visitation of Those Above. He had been to the white man's school, certainly, but white men did not know everything. They might know what was good for themselves, but they did not always know what was good for the Indian. For centuries the Acomas had been a highly favored people, cared for by the goodness and wisdom of Those Above, but the gods were only to be propitiated by reverence and due observa-

tions of the old time methods of worship. To impress this fact upon the educated mind of the youth, it had been decided by those present that certain impressions should be made upon the young renegade's body."

Immediately four of the most stalwart men

JAMES MILLER (SEATED), WIFE AND BROTHER-IN-LAW

sprang forward, tied the youth's hands above his head by means of a rawhide riata, which was then pulled over one of the overhead beams. It took four willing pairs of hands but a moment to stretch the rope tight so that the lad's toes just touched the ground and enabled him to keep himself from swing-

ing. His blanket had fallen from him, exposing his entire nude body save for the G string around his loins. The next moment a rawhide whip was brought down with force and vigor upon the bronzed flesh to the rhythmic beating of the *tombé* and the accompaniment of the weird "song of punishment."

When the now repentant youth was lowered to the ground, it was found that he had fainted, and it took several long weeks for the cruel wounds upon his back fully to heal.

But he had learned his lesson. It was that the "ways of the old" are not always to be changed in a few hours by the frivolous remarks of one who has received education in a different civilization. Some of the perpetrators of the whipping were afterwards arrested and imprisoned, but later, in speaking to us about it, James Miller, as this civilized Indian had been called at the white man's school, calmly informed us that he had found the only way for him to live was in conformity with the ancient habits of his people, and that the only way he could avert suspicion from himself was by being, as we had seen he was, the most earnest and vigorous dancer in the throng.

THE INDIAN CHORUS

But we have not yet taken a good look at the chorus. The leaders in this are young men dressed in snowy-white shirts and many of them wearing regular sombrero hats. A few have on colored calico shirts, with the usual headband of the Indian. They sing, in perfect time, a tune in rich, resonant voices which

would be a joy to many a chorus-master if they were trained to present his civilized form of music. Some of their songs are quaint and queer, but others have a decidedly civilized sound, as if they had been learned from the Spanish priests of the days gone by.

THE DISTRIBUTION OF THE GIFTS AT ACOMA, N. M.

THE DISTRIBUTION OF THE GIFTS

THE dancing kept up until near the time of the setting-sun. Then all the crowd seemed to center in front of one of the house-tops on which the *caciques* or medicine men were seated, calmly smoking cigarettes and awaiting the arrival of someone. Almost simultaneously with our own arrival at the

rear of the crowd, two stalwart young fellows, followed by two buxom Indian maidens, appeared, each laden down with the gifts that had been deposited during the day in front of the altar. Setting these down by the side of the *caciques,* they withdrew to watch the fun they knew would follow. The *caciques* arose, and, picking up the articles one by one, hurled them out into the midst of the crowd. One can imagine the shouts, yells and cheers that followed. A baked shoulder of mutton was followed by a half dozen loaves, baked in a peculiar mold to conform to certain religious ideas. Pieces of red calico were whirled out, followed or preceded by a squash or watermelon. If either of the latter happened to miss the hands of its would-be catcher and was smashed in its fall, the jollity and merriment seemed only to be increased. The skill of the catchers was equaled only by the speed with which they disposed of that which they caught, each catcher evidently having an accomplice to carry what was caught, and with whom he doubtless shared his plunder later on.

This merry scene continued until all the gifts were distributed, and that brought to a close the ceremonies of that particular day.

AN EXTEMPORIZED PERFORMANCE

It might have been so if we had not been there, but Dr. James and Father Juillard decided upon an extemporized addition to the Indian programme which, after supper, they proceeded to carry out. The former had brought with him fifty pounds of candy, which we had thought a rather large allowance for a band of school boys and girls (ourselves).

We were now to learn why so much had been brought. Sending messengers to every house where there was a boy or girl old enough to walk, it was not long before Lorenzo's house was surrounded by a happy, shouting, gesticulating mob of Acoma youngsters, and the scrambling process of a short time ago was repeated; but the gifts this time were the *dulces* (sweets) of the white man. And rapidly we saw what we thought were *our* sweets thrown to these Indians. In the meantime, Father Juillard had brought out from its case a fine silver cornet, upon which instrument he was a master player. Stepping to the doorway, he led the air while Dr. James taught the assembled youngsters, we helping him with our voices, the two well-known American songs, "John Brown's Body" and "Marching Through Georgia." Then, lining up the youngsters for a procession, of which we formed the disreputable tail, led by the cornet, the whole mob of us started to procession the town, singing these two songs, just as the religious procession had marched through the town in the morning. In a few moments every housetop had its Indian occupants, and smiling bronzed faces of papas and mamas, aunts and uncles, cousins and grandpas, were waving and shouting greetings to the happy, boisterous band of youngsters and the jolly-hearted priest and the white men who were making a festival for the little ones. At first, Professor and Mrs. Young expressed a fear lest the feelings of the Indians should be hurt by what they might regard as a caricature or travesty on their own procession; but the padre and Dr. James knew the Indians too

well to run the risk of giving any such offense. Everybody was delighted. Everybody was radiantly happy. Everybody thought it a grand conclusion to the interesting and happy day.

But even when all the children had been dismissed and we had returned to Lorenzo's house, we found the programme was not yet completed. *Tata* Lorenzo had so enjoyed the playing of the cornet that he had requested the *padre* to give him and his family a little more music. Gladly the genial *padre* responded to his request, and for an hour or more played all kinds of American, French and other airs in which we now and again joined in chorus. Some of the songs were college songs, and in this our artist friend, Mr. Simmons, so heartily joined that before long he was "acting up" and frolicking as college boys generally do when they are having a fine time. He and *Tata* Lorenzo were already great friends, and it must have been the very opposite of their character that had bound them together. *Tata* Lorenzo was the most solemn, dignified, stately Indian we met on the whole trip; while Mr. Simmons was of that excitable, vivacious, jolly temperament that made fun of, for and with everything and everybody. Yet it mattered not what he did, his every act seemed to meet the approval of Lorenzo, and now, all at once, he started a fantastic, dramatic representation of that wild, foolish, frivolous and ridiculous song, "The Wild Man of Borneo Has Just Come to Town." Thrusting his fingers through his long hair and making it stand on end, turning up his coat collar and acting like a veritable wild man, dancing and gesticulating with

a fantastic ferocity and vigor that only a wild African could have emulated, he sung in inimitable style this excruciatingly ridiculous thing—that is, it was excruciatingly ridiculous as he sung it. In front of him sat the dignified Lorenzo. Advancing towards him, retreating from him, dancing to the right and left of him, making all kinds of dramatic gestures, couth and uncouth, he sang until the rest of us were simply hysterical with laughter. Without a change of facial expression to signify what he thought, the immobile Indian sat looking and listening, and only at the conclusion of the song, his hearty congratulations as he arose and his patting of his white friend on the back, affectionately putting his arm around him, showed how sincerely he meant it when in his simple way he exclaimed in Spanish, *"Esta bueno! Esta mucho bueno!"*

We could well have spent a month at Acoma, but the places ahead of us were made alluring and attractive by the brief descriptions every now and again poured into our willing ears by Dr. James. So, reluctantly, we left our most hospitable, kind and interesting host and his family and the many friends we felt we had made in Acoma. Driving back to Laguna, we had another good look at the Enchanted Mesa, riding all around it and thinking of its strange history, and we then took a train for Grants, only thirty miles farther on.

Soon after leaving Laguna we saw large masses of a dark, black rock on each side of the track. These, we were told, were the great lava flows of New Mexico. This whole region is covered with

signs of volcanic activity, of several different periods. The geologists tell us many interesting things about what they read in the cold, black rocks.

On our arrival at Grants we found nothing but a Mexican and Indian trading store, occupied by a garrulous Jew, who treated us very hospitably, and

LAVA FLOW NEAR GRANTS, N. M.

two or three Mexican adobes. On the hills near by were three or four Navaho hogans. From this point, however, we were to visit several interesting places, including San Mateo, San Rafael, Inscription Rock, and Zuni.

A HISTORIC WATER-ROCK

San Mateo is one of the most Mexican towns within the borders of the United States. Here scarcely half

a dozen people could be found who spoke English. We were invited to the home of Don Ramon Chaves, the son of one of the old Spanish dons, Manuel Antonio Chaves, who lived here in great power prior to the time when New Mexico became a part of the United States.

Here we found two most interesting photographs. One was of Don Manuel himself, showing a fine, striking face, with large, luminous eyes, over-arching forehead, mobile lips, and strong but friendly chin, speaking clearly of the man of dignity, character and power. The other portrait was of his wife, who was great-granddaughter of a famous Spanish soldier who, like Don Manuel's father, settled in New Mexico nearly two centuries ago.

The history of Don Manuel is as fascinating as a romance. He was born at the town of Atrisco, on the west side of the Rio Grande, opposite the present city of Albuquerque, on the 18th day of October, 1818. This house in which he lived was built by him.

It was Don Manuel's son, Ramon, who had invited us to San Mateo, and he had sent two wagons and several saddle-horses to meet us at Grants, to convey us the sixteen miles across country over which we had to travel. It was a happy and jolly crowd that piled into the wagons, mixed up with our baggage and camp outfit. For each of us had a roll of bedding, done up in canvas, and we were now going to use it for actually camping out in the open air.

What fun we had on that drive! Nobody seemed to be in a hurry, and we were having too much jollity to care. Some of the horses balked, and one of them

didn't want to go our way, and the drivers seemed to be at their wit's end. Dr. James wickedly said that was because we girls were there and the Mexican drivers couldn't swear as they wished to.

THE WATER POCKET WHERE DON MANUEL CHAVES FOUND WATER AND THUS SAVED HIS LIFE

A few miles from Grants station we left the road in order that we might see a spot that we could have hunted for fifty years and never have found. It was a remarkable cliff or tremendous mass of red sandstone, up which it was no easy matter to climb. On

the top the erosive forces of nature had scooped out of the sandstone a large bowl with several smaller ones that would hold many gallons of water. There was water in it when we saw it, but who could ever have dreamed that, in this sandy desert, there was a reservoir of pure rain-water lifted up like a giant drinking-cup waiting to be filled at each rainstorm! It looked innocent enough, but to show us how important the knowledge of the location of such an unusual water-pocket could be, Dr. James told us the following romantic story of Don Manuel:

When he was sixteen years of age, his oldest brother, José, was made commander of an expedition of fifty young men, who left the town of Cebolleta (where the Chaves family then lived, there being no San Mateo at that time). The expedition was planned for the purpose of punishing the Navahoes, who for many years had been in the habit of waging war upon the New Mexicans, robbing them of their horses and sheep and stealing their children, whom they took and kept in captivity.

It was their expectation that they would find the Navahoes, as was their wont, in isolated bands throughout the country which they regarded as their own. But in this expectation they were sadly disappointed. They marched for a number of days without meeting a single Indian, and at last finding the trail of a small band, they followed it, anticipating a short conflict and a speedy victory. Not being as careful as they should have been, they sent no scouts ahead, and, almost before they were aware, they had entered the heart of Canyon de Chelly,

where several thousands of Indians were gathered for the purpose of holding one of their great feasts and ceremonial dances. The Mexicans were too near the Indians when they were discovered to allow them either to form in battle array or to retreat. The result was that, although every man of the expedition proved himself a hero and fought with the desperation of despair, they were so overwhelmed with numbers that there was no possible chance of escape. It was a desperate hand-to-hand conflict, and the close of the day saw what appeared to be the dead body of every man of the expedition. Manuel's brother was slain outright, and Manuel himself received seven arrow wounds, one arrow having pierced his body through.

Rejoicing in their great victory, the Navahoes moved a mile or two away from the battle-field to continue their dances, and that proved to be Manuel's salvation. For he recovered consciousness during the night, plucked out the arrows from his wounds, and, though scarcely able to stagger, began to hunt among the dead for the body of his brother. Whilst doing this, another member of the party returned to consciousness. It was a civilized Navaho boy who had accompanied the expedition from Cebolleta. This boy had been severely wounded early in the conflict, but had managed to hide himself in the rocks at one side of the canyon. Finding the Indians gone, he came out and assisted Manuel in his search for his brother. When the dead body was found they buried it in the sand. They then decided to escape and find their way back to Cebolleta. Summoning all their

will-power and strength, they started homewards. But, as they had no means of carrying water, and knew they would have to have some to sustain life, they were compelled to take a round-about journey and aim for a spring known as Ojo del Osos (The Spring of the Bears), which is on the site of, and still supplies water to the officers and soldiers at, what is now Fort Wingate. They arrived here parched and almost dead from thirst. Manuel knew that caution would be necessary in drinking, and he begged his companion to be careful and drink moderately, but the poor lad's thirst overcame his good judgment and he drank to excess. Manuel also jumped into the spring. While the water set his wounds to bleeding afresh, the stimulus of the bath was of great benefit to him. The Indian boy, however, refused to bathe, and, instead, plugged up his wounds with the fluffy material picked from the inside of his moccasins. Then they stretched out and slept. When Manuel awoke in the morning he felt wonderfully strengthened and refreshed, but to his great distress his companion lay dead by his side, bloated and distorted. Reluctantly he was compelled to leave the dead body, as he had neither strength nor tools to bury it with, and, with a further saddened heart, started again for home.

But he was still in the heart of a hostile country, and home was many, many miles away. As he had no means of carrying water, he scarcely deemed it possible to sustain life without it until he reached Cebolleta, but he determined to do his best and struggle on. Weary and exhausted at the close of

the day, he felt he must secure water or perish. Next morning as he early began his efforts, he came to an Indian trail which he was impelled to follow. It led directly to this rock. With great difficulty he climbed the steep sides, and there, to his intense delight, he found an abundant supply of water. It was pure, clear and cold, and he drank until he was satisfied. With renewed strength he continued homewards, and that night slept in a beautiful valley, under the shelter of some live-oak trees, and there vowed that if God in His goodness spared his life he would build a chapel for His worship.

The next day he saw the smoke of what he guessed to be the camp-fire of Mexican shepherds on the San Mateo mountains, and, succeeding in attracting their attention, they came to his rescue. Constructing a rude litter, they tenderly carried him to Ceboletta, where his naturally rugged constitution soon enabled him to recover.

He grew to a valiant manhood and ere long became known as one of the bravest Indian fighters of New Mexico, a reputation he maintained until his death, having led many successful expeditions against the Navahoes. When General Kearny marched upon Santa Fe he was one of the Mexican patriots who would have fought to arrest his progress, but when Governor Amijo declined to fire a shot in defense of his country, Chaves was not long in declaring his allegiance to the United States, a pledge he most faithfully and honorably kept.

In the year 1876—over forty years after his escape from the Navahoes—he moved to San Mateo,

and built the house where we were guests, within a hundred feet of the oak trees that had given him such friendly shelter on that occasion, and there, just behind the trees, he built the chapel of his vow. In this chapel lie his remains, and here a few years ago Dr. James was present at the burial of his wife, who survived him many years.

THE TOWN OF SAN MATEO, N. M.

On our arrival at San Mateo we were at once given a glimpse of genuine Mexican life, for the Spaniards and Mexicans live here today in actually the same manner as if they were in the heart of Mexico. Practically nothing is changed, and their customs are as they have been from time immemorial.

It had all been arranged beforehand that we were to eat nothing but Mexican dishes, hear nothing but Spanish music and songs, and listen to nothing but

Spanish and Mexican stories. We stayed here for four happy days and got most interesting glimpses of a civilization of which we had hitherto known nothing, never dreaming that there was anything of the kind existent within the borders of our United States.

The house was a large squarish structure built of adobe (which latter word, by the way, is not pronounced a-dob, but in three syllables, thus, a-do-by). It had a flat roof, from which wooden gutters ran to carry off the rain. The walls were plastered over with adobe and then whitewashed. The people who live in them tell us that they are better than any other kind of house, as they are warm in winter and cool in summer. The rooms were large and comfortable, and the bedroom in which four of us girls were placed was most interesting. We slept on old-fashioned bedsteads, but for counterpanes we had priceless Navaho blankets, blankets that have a history, and were made, perhaps, over a hundred years ago. There was the quaintest little fireplace in one corner, and before we were allowed to get up in the morning one of the many Mexican women servants of the place came in and built us a fire of wood that crackled and sparkled while we dressed.

One day we spent in visiting the homes of the people; another day we went up to see the *morada* of the *penitentes*, for they are very strong here at San Mateo, and still carry on their interesting but dreadful ceremonies. Then, delight of delights, our generous host arranged for us on the following day to ride horseback to the summit of Mount San Mateo,

and, what was more, he planned that we should stay out over night and sleep in our blankets under the stars, regular camp-out fashion, as the sheep-herders and cowboys do, and that we should have supper and breakfast cooked by the camp-fire.

Mount San Mateo is one of the noted mountains of New Mexico. It is called *Tso-tsil* by the Navahoes, and is one of their most sacred mountains. Many of their legends and myths are connected with it. It is 11,389 feet high, and although called San Mateo by the Mexicans, on September 18, 1849, it was named Mount Taylor by Lieutenant J. H. Simpson, of the United States Army, in honor of the then President of the United States. On the map of the Geological Survey, the whole mass is known as Mount San Mateo, while the name given by Lieutenant Simpson is applied only to the highest peak. The Navahoes regard this mountain as the boundary of their country on the south, although at the present day some of their tribe live south of it. The San Francisco mountains form the boundary of their country on the West.

To the geologist this is a most interesting pile. Major C. E. Dutton, of the United States Geological Survey, has written one of his prose-poem monographs upon this mountain and its surroundings, in which he thus speaks of the lava-flows of the region:

"The ages of these eruptions vary greatly. Some are as old, probably, as Middle Eocene time; others are so recent that it seems almost certain that they occurred within the last thousand years, and there is no intrinsic improbability that some of the earliest

Spanish visitors may have witnessed them, though they have left us no records."

But to us the chief matter of interest was that on the very summit of this majestic-looking mountain was the sacred prayer-spring of the Indians, and that at certain intervals in the year the Indians come here to pray for rain. The fact that at certain times of the year a spring of water, or what appears to be such, is to be found, combined with the memories of its fiery vomit, has led them to regard it with peculiar veneration. Not only Zunis, but Acomas, Lagunas, Navahoes, and Hopis go here to beseech "Those Above" to send them rain. For, to them, living as they do in a dreary, barren, desolate land, water is one of the chief necessities of life, and many of their ceremonials and dances owe their origin to this need of rain. Just before the summer closes is the time for prayer. Certain *shamans*, or medicine men, are selected. These generally belong to some family or clan that has shown marked ability in the production of rain in the past. For with the Indian, as with the white man, "Nothing succeeds like success." The medicine man who expects patients must show cures, and so the *shaman* who looks for faith in the people who hear his prayers and supplications and witness his incantations, must show results.

Sometimes the *shamans* of the Navahoes will go to Mount San Mateo alone. The Zunis and Acomas have had rain and do not need to pray for it; and why waste prayers and ceremonies when "Those Above" are good without them? Again, it will be the Acomas who go alone, or the Zunis, or the

Lagunas, or the Apaches. Very rarely do they all appear together. Five years ago was a period of drought for the whole country, and two or three *shamans* from each tribe, each in his own way, made most fervent prayers that rain might be sent in every direction.

See these devout men—wild savages though they appear—as they solemnly ride, some from the east, some from the north, some from the south, and some from the west, by their respective trails to the mountain's summit! Each one shows that he feels the importance of his errand. He is serious, earnest, dignified.

Arrived on the rocky summit, he awaits the others, and when all are there the preparations begin. First of all, the *bahos* or prayer-sticks must be made. These are small sticks of cottonwood, painted in certain conventional colors, generally blue and green, to which feathers are tied with strings of native cotton. Then, carefully wrapped up in a corn husk, a small pinch of *hoddentin*—the sacred corn-meal of the Indian—is fastened to the stick, and, after being smoked over and prayed over, with petitions to the powers of good and evil in all the six cardinal points—north, west, south, east, up, and down—not to interfere with their efficacy, the prayer-sticks are ready.

Now the *shamans* robe themselves in their ceremonial costumes. Each man bedecks himself in special rain-charms, amulets, fetiches. They all have something or other that in times past has proved to be "good medicine."

One old *shaman* is recognized as master of ceremonies, or head priest. He gives autocratic directions, and never are his orders or words questioned. Reverently kneeling, the *shamans* all surround the prayer-spring. The leader softly prays that no man may pray wrongly or selfishly. He asks that everything may be offered from pure hearts. "Those Above" have been very good in the past. They have cared for their children on the earth. These *shamans* have now come to offer their petition for rain, that the corn may grow and everything have its natural increase. He then smokes the sacred pipe, and each *shaman* in turn makes the smoke and puffs it to the six cardinal points. Then, all still kneeling, a prayer-song is quietly chanted, after which the dance begins. Softly at first, growing louder as it proceeds, each *shaman* sings as he dances. This general dance continues for quite a time, and afterwards each *shaman* has his own individual prayer, song, and dance.

For four days these ceremonies continue, and then, ere they leave the spring, each *shaman* digs a channel in the direction of his home—one towards the Navaho country, one towards the Zuni region, one towards Acoma, etc., and, that "Those Above" cannot possible forget that rain is needed in all these directions, prayer-sticks are planted on each side of these channels.

Think of the simple hearts! "Those Above" have power to send the rain, and their memories are treacherous and imperfect and they must be reminded of the needs of all the people!

TO THE SUMMIT OF MOUNT SAN MATEO

It was a beautiful morning when we started. What a lot of fun we had in choosing horses, and of course we all had to ride astride. The idea of the side-saddle had never entered into the minds of these

MOUNT SAN MATEO, N. M.

simple-hearted people. We had great fun watching the Mexicans pack the mules and burros that were to take our provisions, cooking utensils and bedding. Very fortunately, as it afterwards transpired, our guide insisted upon sending up several large pieces of canvas which the Mexicans were going to leave behind. When we were all ready, stirrups adjusted,

and each of us provided with a little switch to act as a persuader for our ponies if they became refractory, our caravan started. The sky was absolutely cloudless, the air was still, the weather serene, and it seemed as if we were going to have one of the most delightful of excursions.

To attempt to describe the ride and the numberless outlooks as we ascended higher and higher would be altogether beyond my feeble powers of description. There were some most beautiful groves of quaking aspen, and several times the trail wound where fat-looking cattle grazed contentedly, looking up at us with eyes full of surprise as we passed by. When we reached the summit, Dr. James pointed out to us a number of most interesting features in the country round about, and promised to tell us, that night as we sat around the camp-fire, the Navaho legends in regard to them. One great flow of black-looking lava, which he said had one time poured out from the open crater near where we were, the Navahoes called "the blood of Yeitso," one of their mythical hideous cannibalistic monsters who, according to their legend, was slain near here. Not much farther away was a peak which the Mexicans called El Cabazon, and this the Navahoes believe to be the head of Yeitso, placed there after he was slain by their hero gods. Not far away, to the east, we could clearly see the silver path of the Rio Grande winding its way to the south, while in the far away western horizon were the San Francisco mountains, the *Do-ko-tslid* of the Navahoes.

But our chief interest centered around the prayer-

spring. Just as we had been told, we found a natural basin on the summit. At this time it was practically dry, although we could see that there were times when it was full of water. The Mexicans said that if we were to dig there even now we should find water. All around the bowl were stuck into the ground little wooden pegs to which neatly wrapped corn-husks full of corn-meal, with two or three feathers, were tied. These were the *bahos*—often spelled pahos; for the pronunciation sometimes seems to be one and sometimes the other—or prayer-sticks that all Indians use in their prayers. We gathered quite a number of them, for there must have been hundreds. Each of us had quite a batch. In addition, we found a number of wampum beads made from shell, and many beautiful pieces of turquoise through which a hole had been bored, showing that they likewise had been used on strings of beads.

That night we all helped provide supper, for we were ravenously hungry. Almost as soon as the pack-mules reached the summit, one of the Mexicans had built a fire and put on their big kettle of *frijoles*—the delicious red bean of the Mexicans; and when they were pretty well cooked he had sliced into them several onions, tomatoes, and some red pepper.

Now we were to have a specimen of Dr. James's cooking of biscuits on the camp-fire. A large bread-pan and a full sack of flour had been brought up. Four iron Dutch ovens had been sent up. Just think of it! Those dear, good Spaniards had gone to all this trouble simply to give us school-children the pleasant experience of eating hot biscuit made over

a camp-fire and cooked in a Dutch oven, on the summit of a mountain about twelve thousand feet high, in the heart of what we had always considered a desert. Such hospitality was never heard of. You can rest assured there was a great deal of interest and curiosity, as well as sly laughter and humor, when Dr. James took off his coat and got ready to make the biscuit. One of the girls asked him if he was not going to wash his hands. He replied, "Yes, I am; and I am going to show you how the mountaineer and plainsman use a canteen when washing their hands." Taking a cake of soap out of the box, he lifted up the canteen, unscrewed the top, then held the vessel between his knees, with the open top of the canteen so tilted that when he jerked his knees forward a little of the water came out into his open hands. After he had well-lathered and washed his hands, a few more jerks of the knees sent out enough water to thoroughly rinse them, and he was ready to go to work.

Somehow, he didn't seem embarrassed at all. He went to work just as if he knew how. Yet he didn't weigh the flour, nor did he cautiously measure the baking-powder. He seemed to know just how much to use. By his side he had two cans of unsweetened condensed milk, and as he poured in the water he added the milk, stirring the flour and baking-powder very vigorously while he poured in the two liquids. He had already placed the four Dutch ovens on beds of live coals which he had scraped away from the main camp-fire. In each Dutch oven was placed a fair-sized chunk of fat mutton, which was already

sizzling and spattering in the heat. Then, without any attempt at kneading, he dropped large spoonfuls of the well-mixed dough into the hot fat until the space was covered. Another oven was filled almost as quickly as I am telling the story, and yet another, and finally the fourth. In the meantime one of the Mexicans had put the iron lid upon the first oven, and with a shovel had covered it with hot ashes. The three ovens were treated in like fashion, and then the Doctor turned his attention to the frying-pans, in which he quickly placed slices of ham, bacon, venison and mutton-chops, all of which our kindly host had sent up from the valley below. How delicious it smelled on that mountain height! A big kettle of potatoes was also cooking, and two steaming gallon cans of coffee. For those who did not want coffee, there was an equally large can of cocoa.

OUR MOUNTAIN SUPPER

Where were we going to eat? No sooner was the question asked than we began to understand why Dr. James had sent up some of the canvas that the Mexicans were going to leave below. One large square was spread out a little distance from the fire, and yet near enough to feel the warmth, and we girls were put to work to place the cups, knives, forks, spoons and agateware plates, which were so deep they looked like soup dishes. We had scarcely done the work when the Dutch ovens were opened, the lids being lifted off by a long stick, and the biscuits were found as brown and delicious as they could be.

These were put down on the canvas so that they might be within easy reach of all. Cans of sugar and salt were also placed on the canvas, with several cans of condensed milk, in the tops of which two holes had been thrust, one small, to let the air in, and the other one a little larger, out of which the milk was to be poured.

Then with a loud yell the Doctor called us to take our places. We needed no second urging. With frying-pan in hand, he marched around the canvas, followed by his three Mexican assistants, each with a frying-pan,—one with ham, one with bacon, one with venison, and one with mutton-chops. There was no waiting to decide. We had to decide quick as a flash, or we were passed by; and before we could consider, the four returned to us again, one with the pot of potatoes, the second with the beans, made delicious and savory with the onions, tomatoes and chili; while the two others required us to hold up our cups to be filled with either coffee or cocoa. It was done so quickly that we were all served almost before we could think. And we were scarcely served before we set to work. What a meal it was! How we ate, and joked each other about our ferocious appetites; and how we laughed and drank coffee and cocoa, and called for more, and devoured those delicious biscuits! The Doctor had no chance to eat, for he had to go to work and make up another batch, they disappeared so speedily; but I noticed he made up for it when he did sit down, though he had given us a pretty serious talk about eating so rapidly, and had urged us to Fletcherize our food. If he

Fletcherized, he did it, as one of the boys said, by "champing extra fast."

After supper a cry came for volunteers to wash dishes. Water already was boiling, with a bucket of cold water brought up by one of the Mexicans from a spring a little lower down on the mountain. It did not take long to "polish off" the work. As soon as everything was properly dried, the dishes, etc. were placed in clean sacks brought up for that purpose, and put back into the *kyaxes,* to be ready for breakfast; and then we all rushed in different directions to bring back each one an armful of wood for the camp-fire, or, in the case of the boys, to drag trunks and branches as big as they were able to handle. We built up a tremendous bonfire, and by this time night was beginning to close in rapidly. Bringing up our rolls of bedding to sit on, we now surrounded the blazing fire and huddled together near enough to hear the Navaho legend which Dr. James had promised to give. First of all he gave us a little history of the Navahoes.

THE NAVAHO INDIANS

The Navahoes are one of the most interesting Indian tribes of the Southwest. Where they got the name Navaho, it is rather hard to tell. It is not their own name for themselves, and the first time it is known to occur in literature is after the Spaniards came, in 1540, when this tribe was called the Navaho-Apaches. They are regarded as a portion of the great Tinneh family of Indians, who came into this

region from Alaska; but in the origin-legend, part of which story I am going to tell you, they speak of themselves as a cosmopolite people, made up of many different stocks, even including the great Pueblos.

Their reservation is partially in New Mexico and partially in Arizona. When the trains reach the neighborhood of Fort Wingate, just after descending the Continental Divide, the eastern border of the reservation is almost due north. It then extends westward until its western limit is reached, about in a line due north from Flagstaff. To the north it overlaps the Hopi reservation, which extends about parallel with Holbrook on the east and Canyon Diablo on the west.

Perhaps there is no other tribe of Indians in America that is "holding its own" in population as is the Navaho. The census of 1890 gave them a population of 17,204, but there was some doubt cast upon the accuracy of these figures. In round numbers, it is now generally believed there are about twenty thousand of them.

As a people they are independent, honest, truthful; reliable in their dealings with the whites; make good husbands and fathers; but are warlike, and quick to resent an injury, a slight, or what they regard as an unjust encroachment upon their rights. There is many a white man, I am satisfied, who has paid the forfeit with his life in open, frank warfare with a Navaho because he had insulted him under the common American notion that he was nothing but a savage.

Their women are wonderful blanket-weavers, and in hidden nooks of quiet canyons, or in the open, by the side of their rude *ho-gáns,* may be seen, all over their reservations, special shacks in which they have erected the rude looms, of home manufacture, on which their blankets are made. The older weaves

Copyright by George Wharton James

A NAVAHO BLANKET WEAVER

are much prized by collectors, especially those that were colored with native dyes. The Navaho women formerly used only three dyes. These were red, blue, and old gold green. They got the white and black wool direct from the sheep, and mixed them to make gray, so that in reality they had six colors. Their designs, while primitive, had direct signifi-

cance to the weaver, every pattern introduced being a sign or symbol that made the blanket the record of the weaver's thought or emotion at the time of weaving.

The men are expert but rude silversmiths, making buckles, bracelets, rings, etc., which are now quite popular with the whites.

*The Navahoes are wonderful story-tellers, and some of their legends are quaint, interesting, beautiful and instructive. These four adjectives may seem to be carelessly chosen, but they are not. They truthfully designate these stories. Naturally, when one gets a real peep into the mind of the Indian, his methods of thought are quaint. And in these legends this quaintness is enhanced by the fact that the stories are old and have all that peculiar flavor that belongs to stories that have been handed down for many hundreds of years. And how can the stories that account for their origin, which are entirely different from our origin stories, be other than interesting to those who like to know how the human mind works with different people, influenced by their own peculiar environment? That some parts of their stories are horrible may be expected, for they deal with the primitive instincts of man, where cruelty, even to murder, is no uncommon thing, and blood is made to flow freely. But just as the fierce thunder and lightning storm is often followed by the most exquisite and tender sky-effects, so are these harsh and bloody stories preceded and followed by revelations of ex-

* This story is taken from Dr. W. Matthews's "Navaho Legends," published by the Folk-Lore Society.

quisite tenderness, gentleness, kindness and love. The instructiveness of these legends is in the opportunity they afford for the student to see the working of the primitive mind. The human mind is subject to laws of development exactly as is the body, and it has grown up from its childhood just as each man has grown up from babyhood. In studying these Indian stories we are getting back to the period of the child-mind of the race, and such revelations are found to be in the highest degree instructive.

To tell the whole story of the origin of the Navahoes would fill a good-sized book. The first part of the legend tells of the emergence of the people from the four lower worlds into the fifth world. The second part tells of their experience in the fifth world. The third part tells of the war-gods; the fourth, of the growth of the Navaho nation.

It is in the third part that we learn the story of Yeitso, who was slain by two heroes of the tribe, who cut off his head and placed it to the east of Mount San Mateo, where it is known as Cabezon and where the lava flow is regarded as the flow of his blood.

Soon after these two boys were born, while their mothers were baking corn-cakes, Yeitso, the tallest and fiercest of the alien gods of the Navahoes, appeared, walking rapidly towards the *ho-gán.* Knowing that he was a fierce cannibal and would slay and eat their children, one of the mothers hastily grabbed them up, earnestly cautioning them to be perfectly silent, and hid them away in the bushes, under some bundles and sticks. Yeitso came and sat down at the door just as the women were taking

the cakes out of the ashes. He wanted one of the cakes, but the women refused it. "Never mind," said Yeitso, "I would rather eat boys. Where are your boys? I have been told you have some here, and have come to get them." Putting Yeitso off as well as they could, they finally made him believe that there were no boys around.

It was not very long after he had gone before one of the women, having to go to the top of a nearby hill, saw a number of these alien gods hastening towards their *hogan* from all directions. Hurrying down, in great distress she told her sister. This sister had magical power, and, picking up four colored hoops, she threw the white one to the east, the blue one to the south, the yellow one to the west, and the black one to the north. These magic hoops produced a great gale, which blew so fiercely in all directions from the *hogan* that even the great power of the alien gods was not sufficient to allow them to approach it.

The two boys that Yeitso was hunting were little fellows of superhuman origin, and, having no fathers as other boys had, were curious to find their fathers, and, in spite of the prohibitions of their mothers, would keep journeying first in one direction and then in another, determined to find their fathers. Their adventures were far more peculiar and strange than those related in "Alice in Wonderland." Indeed, when it comes to invention, the author of this popular white child's book is only a beginner compared with these expert Navaho story-tellers.

How I should like to tell you of their visit to the

underworld, where they found the "Spider-Woman." She it was who gave them their magic charms and taught them many magic formulæ. One of these explains why the Navahoes gather and use so much pollen in their ceremonies. Pollen, while plentiful in the aggregate, is very light, airy, floating stuff, and exceedingly difficult to gather. Yet the Navaho medicine men are indefatigable in procuring certain kinds of pollen at certain times of the year when the moon is in certain exact locations.

When these boys met their giant enemies, all they had to do was to sprinkle towards them some certain kind of pollen and then repeat this formula: "Put your feet down with pollen. Put your hands down with pollen. Put your head down with pollen. Then your feet are pollen; your hands are pollen; your body is pollen; your mind is pollen; your voice is pollen. The trail is beautiful. Be still."

Here is one of the incidents that occurred as the two boys left the house of the Spider-Woman. They came to the place known as "Tse'yeinti'li" (the rocks that crush). There was here a narrow chasm between two high cliffs. When a traveller approached, the rocks would open wide apart, apparently to give him easy passage and invite him to enter; but as soon as he was within the cleft they would close like hands clapping and crush him to death. These rocks were really people; they thought like men; they were *anaye* (that is, cannibalistic gods). When the boys got to the rocks they lifted their feet as if about to enter the chasm, and the rocks opened to let them in. Then the boys put down their feet, but withdrew

them quickly. The rocks closed with a snap to crush them, but the boys remained safe on the outside. Thus four times did they deceive the rocks. When they had closed for the fourth time, the rocks said: "Who are ye, whence come ye two together, and whither go ye?" "We are children of the Sun," answered the boys. "We come from *Dsilnaotil,* and we go to seek the house of our father." Then they repeated the words that the Spider-Woman had taught them, and the rocks said, "Pass on to the house of your father." When next they ventured to step into the chasm the rocks did not close, and they passed safely on.

The boys kept on their way, and soon came to a great plain covered with reeds that had great leaves on them as sharp as knives. When the boys came to the edge of the field of reeds (*Lokaadikisi*), the latter opened, showing a clear passage through to the other side. The boys pretended to enter, but retreated, and as they did so the walls of reeds rushed together to kill them. Thus four times did they deceive the reeds. Then the reeds spoke to them as the rocks had done; they answered and repeated the sacred words. "Pass on to the house of your father," said the reeds, and the boys passed on in safety.

The next danger they encountered was in the country covered with cane cactuses. These cactuses rushed at and tore to pieces whoever attempted to pass through them. When the boys came to the cactuses the latter opened their ranks to let the travellers pass on, as the reeds had done before. But the boys deceived them as they had deceived the reeds, and

subdued them as they had subdued the reeds, and passed on in safety.

After they had passed the country of the cactus they came, in time, to *Saitad,* the land of the rising sands. Here was a great desert of sands that rose and whirled and boiled like water in a pot, and overwhelmed the traveller who ventured among them. As the boys approached, the sands became still more agitated, and the boys did not dare venture among them. "Who are ye?" said the sands, "and whence come ye?" "We are children of the Sun, we came from *Dsilnaotil,* and we go to seek the house of our father." These words were four times said. Then the elder of the boys repeated his sacred formula; the sands subsided, saying, "Pass on to the house of your father," and the boys continued on their journey over the desert of sands.

The boys finally reached the house of the Sun God, their father. It was built of turquoise, but square like a pueblo house, and stood on the shore of a "great water." Here they were in much danger and would undoubtedly have perished had it not been that they were magically protected. For in a short time the giant who bore the Sun on his shoulder came in. He took the Sun off his back and hung it on a peg on the west wall of the room, where it shook and clanged for some time, going "tla, tla, tla, tla," till at last it hung still. It took some time for the bearer of the Sun God to realize that he was the father of these boys, but when he did he greeted them with great affection and asked them their mission. They explained that the land in which they dwelt was

cursed and devastated by the presence of a number of alien gods who devoured their people. Said they: "They have eaten nearly all of our kine; there are few left; already they have sought our lives, and we have run away to escape them. Give us, we beg, the weapons with which we may slay our enemies. Help us to destroy them." This petition pleased the bearer of the Sun God and he gave them clothing and a number of weapons which would enable them to accomplish what they desired. He took from the pegs where they hung around the room and gave to each a hat, a shirt, leggings, moccasins, all made of iron; a chain-lightning arrow, a sheet-lightning arrow, a sunbeam arrow, a rainbow arrow, and a great stone-knife or knife-club. "These are what we want," said the boys. They put on the clothes of iron, and streaks of lightning shot from every joint.

After more trials of their shrewdness and powers of perception, during which time the Sun God carried them through the heavens, he, finally, after making them point out the place where they lived, spread out a streak of lightning on which he shot down his children to the summit of Mount San Mateo. Here four holy people told them all about Yeitso. They said that he showed himself every day three times on the mountains before he came down, and when he showed himself for the fourth time he descended from the mountain to drink; that, when he stooped down to drink, one hand rested on the mountain and the other on the high hills on the opposite side of the valley, while his feet stretched as

far away as a man could walk between sunrise and noon. This was the opportunity the boys wanted. While waiting, however, they decided to try one of the lightning arrows which their father had given them. When they shot it, it made a great cleft in the side of Mount San Mateo, where it remains to this day, and one of the brothers said to the other: "We cannot suffer in combat while we have such weapons as these."

Soon they heard the sounds of thunderous footsteps, and they beheld the head of Yeitso peering over a high hill in the east. It was withdrawn in a moment. Soon after, the monster raised his head and chest over a hill in the south, and remained a little longer in sight than when he was in the east. Later he displayed his body to the waist over a hill in the west; and lastly he showed himself down to the knees over a mountain in the north. Then he descended, came to the edge of the lake, and laid down a basket which he was accustomed to carry. He stooped down to drink, and so frightful was his appearance that it made the boys afraid; but by and by their courage came back and they taunted the giant when he made a threat that he was going to eat them. The *Wind* (who in Navaho mythology is a personification), in his kindness towards the boys, gave them warning as to the treacherous acts contemplated by Yeitso, and made it possible for them to dodge the lightning bolts that he rapidly hurled at them one after another. Escaping the giant's arrows, the brothers had time to put their own lightning arrows into place, pull the bow-string

taut, and fire. Four times did the elder brother shoot, and when the fourth arrow struck the giant it brought him to the ground, flat upon his face, his arms and legs outstretched. As he lay there, the younger brother stepped up and scalped him, and then they cut off his head and threw it away where it may be seen to this day.

The blood from the body flowed in a great stream down the valley, and the boys stood watching it, with no thought of danger until their friend, Wind, told them that it was flowing in the direction of the home of another alien god and that if it reached that far Yeitso would come to life again. Then the elder brother took his great stone-knife, which had magic power, and drew a line with it across the valley. When the blood reached this line it piled itself high until it began to flow in another direction. Here again was danger, for Wind whispered that it was flowing towards the home of another alien god known as 'Bear that Pursues,' and that if it reached this far, Yeitso would come to life again. Again the elder brother drew a line with his knife on the ground, and again the blood piled up and stopped flowing; and that is the reason the blood of Yeitso fills all the valley today, the high cliffs of black rocks that you see being the places where the blood piled up after the elder brother had drawn the line with his magic knife."

SLEEPING ON THE MOUNTAIN TOP

As soon as the story was finished, Mrs. Young thought it was time for us to go to bed. It is amazing how easily things are done when you know how to do them. Everything had been planned so that not less than ten minutes after we arose from the camp-fire the boys had carried the blankets for us girls out to one side on the mountain, where we were fairly well secluded, and they had taken their own to the other side. Near to us Professor and Mrs. Young had placed their blankets so that we felt in a measure protected, and the Mexicans went down on the mountainside a little way to where the horses were tied, and it seemed to us that they acted as a kind of picket-guard to protect us from surprise. We did not know whether to undress or not, and it is hard to tell whether we all undressed or only partially undressed. I began by taking off very little of my clothing, but I found as the night went on I took off more. At first it was too wonderful to sleep. The stars were so beautiful, the air so delicious, the feeling so mysterious. What a wonderful change it was from the city of Chicago. To think that I, a girl born in a large city and who had never been far away from home, was stretched out here in the open, in a country surrounded by Indians and on the summit of a mountain over 11,000 feet high. Several times I had to pinch myself to be sure I was not dreaming.

I do not know when I got to sleep for I seemed to lie awake a long time and I remember that before I dozed off I half consciously observed a tremendous

black cloud floating towards us from the south. But I was too sleepy to pay much attention to it. All at once I was awakened by the patter of rain dropping on my face and by the voice of some one shouting. I think we all must have awakened at the same time. Dr. James was running about like one possessed. Again we saw why he had brought the canvas. One of these was large enough to cover us four girls and almost as soon as the rain had begun to descend we were completely sheltered under one of these thoughtfully provided sheets. Professor and Mrs. Young had one, but the boys got wet. It happened in this way. Instead of snuggling up together, they had decided to sleep where each one fancied and the result was they were somewhat scattered when the rain came. In order to avail themselves of the one canvas, they had to get up and pull their blankets together, and while they were doing this they got wet. But it did not seem to hurt them, for they were soon off to sleep again and paid no more attention to the rain than if it had not come at all. We girls did not sleep much more that night, at least I didn't think so, although Mrs. Young assures us that she heard some snoring from our blankets after the rain had ceased.

But while it lasted how it did pour! I began to feel queer about those *bahos* I had stolen and when I did drop off into a little snooze, it was to dream about fierce Indians coming to punish us for taking them, and in the dim distance I could see the blood pouring from the headless body of Yeitso and coagulating in the valley beneath, while his head grinned at me from El Cabazon.

We were a little damp in the morning, but as the rain had stopped and the skies were clear and we did not get up until a good hot breakfast was prepared, similar to our supper of the night before, we felt as fresh as larks and happy as could be. We were in no hurry to start back, so we all went botanizing and gathered a number of interesting and beautiful flowers.

It was fun going down the mountain side, for in some places the trail was very steep and the rain had made everything so slippery that it seemed to us as if our horses just about sat down and slid for as much as twenty or thirty yards at a time. But we reached the home of our hospitable host at San Mateo without either accident or mishap, after the most wonderful and interesting trip that I had ever enjoyed.

TO SAN RAFAEL

On our return to Grants, we were driven out three miles to the quaintly interesting town of San Rafael. On our way we passed several piles of stone upon which were placed crosses each bearing a rude inscription. We were told that these were spots where the coffin had rested of some one being conveyed to the burying-place, and that at each place where the bearers rested it was the custom to place these crosses. There were not many things at San Rafael that were different from San Mateo, but one thing interested us very much. We passed a large clump of entraña, or candlestick cactus, as the Americans call it, one of the most cruel and thorny of the cactus family.

At San Rafael, we met a number of the penitente brothers, and the missionary there told us that he and Dr. James together had seen a half dozen of these men take large bundles of these thorn covered cactuses and tie them upon their naked backs. They had seen these same men lie down, pressing their whole bodies upon the cruel thorns which penetrated and lacerated their bodies dreadfully. The penitentes of San Rafael make it their boast and glory that so many of them thus punish themselves with the cruel entraña.

RIVERS OF LAVA

We stayed that night at San Rafael and the next day drove through and over a remarkable lava-flow. It was a most picturesque ride in and out of mountain valleys where tall pines grow in stately majesty. We were told that this whole Zuni mountain range is covered with ruins of a long-forgotten people, who were undoubtedly driven out of the country, not by famine, not by pestilence, not by the power of enemies, but by the overflows of lava which came in resistless floods from different peaks of the range.

Certainly the appearance of the country indicates tremendous volcanic activity, but it is hard to realize that people could have been living here and were driven from their homes when these awful demonstrations of nature's power occurred. Of course we recalled the recent outbreak of Mount Pelee and the disturbances of California and Italy, yet in spite of these facts and our historic readings about the destruction of Herculaneum and Pompeii, it seemed

impossible that we were actually in a region where people were driven from their homes by positive, real, actual flows of red-hot molten rock poured out from the interior of the earth. We are told that there are even Indian houses in this part of the country into which the lava has flowed, clearly indicating that the Indians must have been living here when the outburst occurred, but Dr. James says that though he has hunted for these houses he has never been able to find one of them.

Be that as it may, he took us to two level mesas on the top of which were a vast number of ruins, clearly showing that at one time there must have been at each place a village of some hundreds of inhabitants.

The wall of one of these places was made of red sandstone that the Indians had found in this neighborhood, and which they had hammered or dressed, for the marks of the hammer were still clearly to be seen. We are told that dressed stone is very seldom found among any of these ruins.

The boys wanted to dig into these ruins, and there is no doubt they would have found many interesting things had they done so, as they are both large and extensive and as yet have never been made the scene of either the scientific explorer or the treasure-hunter.

We now went up to the spring known as *Agua Fria,* (the cold water). And how cold and delicious it was. We became pretty well used to all kinds of water in New Mexico, some of it very brackish and unpleasant, and a great deal of it positively horrible

with alkali and other minerals, but this was as fresh, sweet and delicious as any water we ever tasted.

Here we camped for the night, as we were in the midst of a beautiful pine forest and it was decided that we should see the big crater we had come up to examine, early the next morning.

AGUA FRIA CRATER

There are scores of these craters in the Zuni Range, and the lava which has flowed from them has overrun the country for many scores of square miles. Here, as in the region of Mount San Mateo, even our untrained eyes could clearly see there had been several different flows at different periods. For instance, we saw great groves of pine trees from 150 to 250 feet high naturally growing out of these ancient lava flows. Then zigzagging over these were later flows which had clearly destroyed the trees that stood in their path. Coming up the Zuni Canyon, places had been pointed out to us where not only the lava poured down from the heights above in its fiery flood, but in places it really appeared as if it had forced its way out from its seething source in the bowels of the earth directly under the sandstone rocks of which the sides of the canyon were formed.

Immediately after breakfast, we started out for the great Agua Fria crater. The trees have so completely surrounded it and even struggled up its sides, that one can scarcely see it until he gets very near to it. Though one side of it is steep and made up of such small disintegrated particles of lava that the

ascent on that side is almost hopeless, we found the other side a comparatively easy slope, and while hard, the climb was neither exhausting nor dangerous.

It was certainly a wonderful sight when we stood at last on the top of this gigantic bowl. It took us some little time to take in its majestic proportions. We were standing on "the edge of nothing." The solid rock made a sheer drop immediately before us into the dizzying abyss and while we could see the bottom, an immense tree was growing there which added to the dimness and mystery. Nearly opposite from where we stood, the whole side of the crater had been broken down about three-fourths of its height. And we tried to picture what must have occurred when that break was made. We had no means of measuring the exact size of the crater, but we estimated it must have been from 1,500 to 2,000 feet across and at least 700 or 800 feet deep.

Did you ever look into one of the furnaces in South Chicago where they were converting iron into steel and see the incandescent mass bubbling and seething under the intense heat? Something like this the great mass of lava in the crater must have been when it burst out on the other side. We talk and write about it, but it is impossible to conceive this immense natural kettle full of rock, boiling and bubbling like water, but sending its fierce heat and poisonous fumes into the surrounding air. Then, all at once, with a sudden crash and muffled roar, the great wall on the north breaks and out pours the wild, raging flood with its fierce heat to spread out over the valley. Once started, it did not stop for days, for

one can follow this stream for many miles, and it spread out taking desolation wherever it went. If one could have been in a safe place and watched it, it must have been an awe-inspiring sight—the flood of fire, nearly 500 feet high when it first burst forth, sweeping away and burning everything that came in its track. And a peculiar thing about these lava-flows is that the outside cools very rapidly and solidifies, while the material in the interior still remains molten and pours on, so here one would have had a strange spectacle of seeing the cooling lava make its own arched-over tunnel through which the molten current flowed. These tunnels became filled with gas made by the melting rocks, and sometimes were swelled out into large caves. We found numbers of such caves, near Laguna, San Mateo, here at Agua Fria, and near the San Francisco mountains. Sometimes the half molten rock would be turned over by the force of the expanding gas until it seemed as if a gigantic plowshare, able to turn a furrow forty feet high, had come along plowing up the rock when it was in a plastic state in this gigantic fashion. Again in places the gas must have exploded and scattered the rocks as it did so, so that it looks today like hundreds of thousands of huge masses of diabolical black cauliflowers.

Dr. James says that he has spent many days following these lava-flows, and when he has tried to walk over these blown-up masses his shoes have been cut to pieces in a very few hours. He says that he has wandered over the famous lava-flows in the south of France, but neither in extent, grandeur nor diver-

sity do they begin to compare with the lava-flows of New Mexico and Arizona. Certainly they must be very wonderful if they are equal to even the small glimpses we had of the flows at San Mateo and here in the Zuni mountains.

It was a pleasant trip back to Grants, and there, after another night of camping out, we were met by a delightful Mexican gentleman, Don Leopoldo Mazon, with teams with which he was to drive us to one of the places we had long dreamed of, but never expected to see. We were actually on our way to see that most marvelous autograph album of history, known as Inscription Rock, and then were going on to Zuni, where the big community house is, and where they believe in witches and hang them, even up to the present day.

Don Mazon's carriage and spring wagons were all right, but his horses were broncos of intractable and unbroken spirit. They had wills of their own which they were not afraid of showing, and it was most amusing to see and hear the performances and antics of the broncos and the expostulations and arguments of the drivers. While we were getting into the wagon the animals danced around in a frenzy of excitement and fear, and it took a man at the head of each horse to keep them from running away. When we started they jumped and plunged and reared and cavorted and pushed sideways and hit against each other in the most frantic manner. Don Leopoldo seemed to be used to it, and talked gently and made soothing noises with his lips while he let the lines out at arm's length. It really was very,

very funny, although when they were running, as they did at times, in places where the road was sidling, it seemed as if we should surely upset. Looking back, I saw that the driver behind us was having even a worse time than we, for accompanying that wagon were two outriders in the shape of Mexican cowboys, each of whom had a *reata* in his hand, with which now and again he would "lambast" the rearing and plunging broncos. At last one of these animals began to balk and settle down with a backward plunge and a desperate shake of the head, as much as to say that no power on earth should move him forward another inch; but the poor creature soon learned his mistake. Lightly throwing their lassoes over the head of the obstinate creature, the cowboys coolly and deliberately wound the other ends of the strong rawhide ropes around the horns of their saddles, and then, when the ropes were fairly taut and the driver was ready, he gave the signal and the two horsemen quickly urged on their horses. The recalcitrant bronco with the backward tendency was immediately hauled forward with a strain on his neck that must have been as painful as it was surprising. At the same time we could not help laughing at the peculiar demeanor of the bronco. A few moments before he had settled back as if nothing on earth could move him, but now he seemed determined to pull with a fury that would have destroyed the wagon could he have had his way.

And this, we are told, is the way some of the Mexicans break their horses to drive. They are all trained to the saddle with comparatively little diffi-

culty, for so many of them are needed to follow the range cattle; but nobody seems either to know or care anything about the proper breaking for driving purposes. Consequently, when it is necessary to use a conveyance there are no properly trained animals,

A CORNER OF DON LEOPOLDO MAZON'S HOUSE WITH EL MORO IN THE DISTANCE

but some of the saddle-animals are harnessed and in this summary fashion are compelled, willy-nilly, to become staid and dignified carriage horses.

We stayed all night at Las Tinajas, Don Leopoldo's hospitable home, so named because near by there are several natural bowls of water.

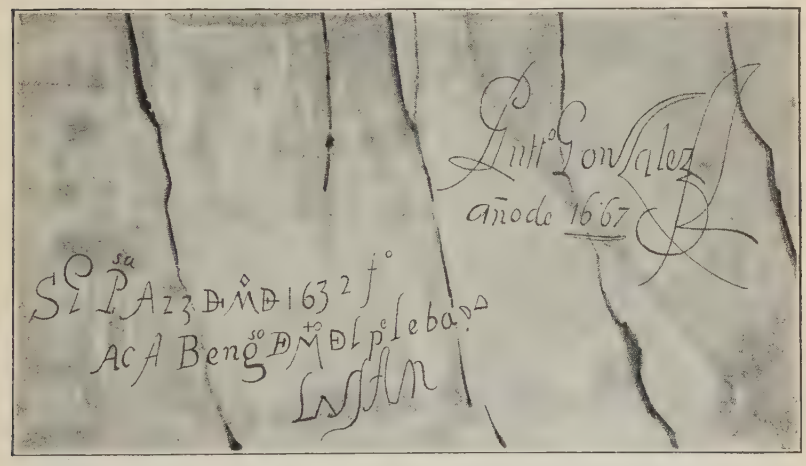
INSCRIPTION ROCK

The next morning we rode the four miles over to Inscription Rock, about which and its wonderful inscriptions we had heard a great deal. They were made by the old Spanish soldiers who wandered over this desert from Zuni to Acoma, and Acoma to Santa Fe, as far back as in the early "sixteen hundreds," or nearly three hundred years ago.

Of the genuineness and historic value of these inscriptions there can be no question. Too many scholars and those thoroughly acquainted with the history of the Southwest have seen and studied them. In Lieutenant Simpson's report to the Secretary of War on his trip through the Navaho country, in 1849, he gives a graphic and very complete description of the rock, and accompanies his report with a number of drawings from the inscriptions, made by his artist, Mr. R. H. Kern. Kern was the artist who accompanied General Fremont on one of his California expeditions, and from him the Kern River was named.

The whole region is one of mesas, faced with precipitous cliffs and topped with caps of lava. But here, between two canyons, the sides of which are dotted with juniper and pinion, stands a massive triangular block of sandstone of pearly whitish aspect, over two hundred feet high, and suggesting in its stupendous grandeur a temple or castle built after the style of the Egyptians, but immeasurably larger. The walls are seamed and marked with storms and conflicts of many centuries, and the main

wall is so precipitous, and its summit carved by nature into so close a resemblance to an embattlement, that the Mexicans have always termed it *El Moro* (The Rock), on account of its castle-like appearance. On two sides of the rock are the inscriptions found, and as they were all engraved by men standing at the base of the rock, very few of them are higher than a man's head. The perfection of the



INSCRIPTIONS ON NORTH FACE OF INSCRIPTION ROCK

inscriptions is remarkable. They are as distinctive in their character as the handwritings of men on paper, and all of them are remarkably well done. The surprising thing is that after all these years they are still so perfect; but this is accounted for by the peculiar character of the rock and the fact that it does not crumble when exposed to the weather. It is of a very fine grain and comparatively easy to

scratch into, and the two walls upon which the inscriptions occur being practically protected from storms, these rock autographs remain almost as clear and as perfect as the day they were written. That

EL MORO INSCRIPTION ROCK

of Lieutenant Simpson seems as if made but yesterday. It was neatly done in a parallelogram by Mr. Kern, and reads as follows: "Lt. J. H. Simpson, U. S. A., and R. H. Kern, artist, visited and copied these inscriptions, September 17th, 1849."

The major part of the inscriptions are on the

north face of the rock—a very striking one being that of Bishop Elizaecochea, of Durango, Mexico. Here is the inscription as copied by Mr. Kern. Its translation is as follows: "On the 28th day of September of 1737, reached here the most illustrious Señor Doctor Don Martin De Elizaecochea, Bishop of Durango, and on the 29th day passed on to Zuni." This refers to one of the official visits made by the Bishop of Durango, in whose district the whole of New Mexico belonged, and to which it remained attached until 1852.

Just above that of the Bishop and slightly to the left are two other autographs, doubtless of members of his party. Between them is a fairly well engraved representation of an ornamented cross. The larger inscription reads as follows: "On the 28th day of September, 1737, reached here 'B' [supposed to represent Bachiller—Bachelor—of Arts] Don Juan Ygnacio De Arrasain"; and the other merely says, "There passed by here Dyego Belagus."

There are many inscriptions of great interest, especially when you know the stories of their makers. These were told to us by Professor Young and Dr. James, and they included De Silva Nieto, a former Governor of New Mexico (1629), General Juan Paez Hurtado (1736), Juan de Oñate (1605), Basconzelos (1726), De Vargas, the reconqueror of New Mexico (1692), Arechuleta (1636), and many others.

One of the inscriptions reproduced by Kern is shown on page 171.

It is quite a puzzling inscription, the peculiar abbreviations being decipherable only by those

familiar with the ancient Spanish writings. Translated into long-hand Spanish and then into English, it reads as follows: "They passed on the 23d of March of the year 1632 to the avenging of the death of the Father Letrado." Father Letrado was the missionary who practically established the Franciscan mission at Zuni. He had already proved his faithfulness by service among the Jumanos, a wild tribe of Indians who occupied the plains east of the Rio Grande. He did not labor long with the Zunis, for in February, 1630, they murdered him. The Governor, Francisco de la Mora Ceballos, sent a handful of soldiers under the command of Colonel Tomas de Albizu to avenge the death of Father Letrado, and it is possible that Lujan was a soldier on this expedition. When the soldiers arrived at Zuni they found that the pueblo was deserted and the people had retired to the summit of Thunder mountain. With great tact and diplomacy Albizu persuaded them to return to their homes, and, on promises of amendment, the breach caused by Father Letrado's murder was healed.

But however interesting the inscriptions are at *El Moro,* they are by no means the only objects to attract our attention. Walking along the east wall for several hundred yards, one finds it possible to scale the rugged slope that leads to the top of *El Moro.* Here, to our surprise, we find that it is practically split in half by a narrow canyon, in the center of which grows a tall pine. This canyon seems literally scooped out of the solid rock, for from the point where we have been examining and copying the

inscriptions there is nothing whatever to indicate its existence. It is a perfect *cul de sac.* A whole army might hide here, and if they observed a discreet silence, another hostile army could occupy the north and south sides of the rock for a week and never dream of their existence.

Perched on the highest summit of the two sides of the rock thus divided by this canyon, are the ruins of two interesting prehistoric villages. The nearer of these ruins presents a rectangle 206 feet wide by 307 feet long, the sides conforming to the four cardinal points. There were evidently two ranges of rooms on the north side and two on the west, with a few rooms within the court. On the north side was found one room seven feet four inches by eight and one-half feet, and on the east side one eight and one-half by seven feet. These were the two largest rooms, except for one circular *kiva* thirty-one feet in diameter, near the middle of the north wall.

The ruin on the opposite side was of the same character, and around both of them we picked up many specimens from the immense quantities of broken pottery, most all decorated after the usual style.

The Zunis have a tradition in regard to the inhabitants of these ruins, and they also tell a most interesting story which refers their abandonment to the time when the great flood of lava threatened the country.

We camped that night at the foot of Inscription Rock, under the pine tree near the spring which had furnished refreshment to Juan de Oñate, De

Vargas, Bishop Elizaecochea, and many other heroes and notables whose names we have been studying. I was very weary, and yet my brain was in such a whirl with the wonderful thrill and fascination of the great events we call history, that I found it almost impossible to sleep. What must have been the thoughts of those soldiers, far away from home and families, knowing that they were in the land of people who hated them, and yet going back and forth day after day, liable to be killed at any moment, but simply accepting the danger as part of their every-day occupation! How hard it is for people of one condition of life and time to comprehend the spirit of the lives of people in other conditions and times!

ON THE ROAD TO ZUNI

In spite of the interest we felt in Inscription Rock, we were all eager to push on the next morning immediately after breakfast, for Zuni was ahead of us, with the fascination of its stories, legends, history, ceremonies and people. The road was sandy and wearisome to travel, being composed of a series of long ascents followed by sudden and rather steep descents. It was through a juniper- and pinion-dotted country, and would have been interesting enough if it had not been so hot and the journey so long.

There was one interesting break, in a marvelous piece of rock sculpture that we saw on our left not far from the road. It was a gigantic flying buttress

with an arch two or three hundred feet high, the whole figure being on a scale of grandeur and magnificence that completely dwarfed the most wonderful work of man in this line.

Leaving this behind us, we pressed on until suddenly the winding road abruptly ended in a black lava descent of nearly 250 feet. There before us was spread out the long looked for plain of Zuni. It was a great red and yellow stretch that reached into the far-away hill lands to the west and south, distorted by mirages and sand-clouds; whilst to our left, a mile or two away, rising from numberless red sandstone foothills, towered a rocky island far larger than either Katzimo or Acoma, possibly a thousand feet high and two or three miles in length along its flat top, which in places was chiseled and carved by the weather into pinnacles, spires, domes and minarets. The entire north side of the valley was closed in by a section of canyon-seamed brown sandstone mesas mantled in pinion and juniper, contrasting richly with the sky, which at this point was deep turquoise and perfectly cloudless. Out from the middle of the rocky hill and line of sand-hills on which we stood, emerged the Zuni River, but it was only a tiny streamlet, winding its way westward across the sandy plain, glistening and shimmering in the evening sun, until it seemed to lose itself in the shadows of a good-sized hummock which arose above the horizon line of the far-away distance. We were drinking in the scene when Dr. James came up behind us and, pointing to the hummock, said, "There is Zuni." It was hard to realize it until with the

field glasses we took a good look. We were then able clearly to see the big pyramid house and tiny moving human figures on the upper terrace, some of which were clearly silhouetted against the glare of the setting sun.

Near where we stood was the place where Marcos de Niza got his first glimpse of this wonderful city, of which Cabeza de Vaca had brought the news into Mexico and had fired the hearts of the Spaniards into the belief that here undoubtedly was one of the fabled "seven cities of Cibola," where gold, jewels and precious stones were to be picked up *ad libitum*.

It was not long before our jaded horses stopped with gladness just across the tiny river opposite Zuni.

THE INDIAN VILLAGE OF ZUNI

The first impression one has of Zuni is of a number of long, flat-roofed adobe-covered houses, such as we had seen at Laguna, but connected with one another in extended rows and squares, piled one above another, lengthwise and crosswise, but getting smaller as they ascend, and each tier receding from the one in front like the steps of a rude-shaped pyramid, with a base that stretched out somewhat indefinitely in each direction. This was the monster community house, which dominates all the other houses in Zuni.

The structure fairly bristled with ladder poles, chimneys and protruding rafters. The ladders were all heavy and long, and stood leaning at all angles against the roofs, or protruded through hatchways

from rooms beneath. Carved slabs of wood were tied across the tops. The chimneys were unlike anything we had seen before, suggesting gigantic bamboos with joints very close together. We found that they were made of bottomless *ollas,* or pottery jars, set one upon another and cemented together with mud. The doorways were small and windows tiny. And from the base to the top, on different steps of

THE PUEBLO OF ZUNI, N. M.

the terraces here and there, were the bee-hive ovens we had become familiar with at Laguna and Acoma.

All around the town, especially on the side where the little river ran, were the tiniest and quaintest little gardens ever seen, separated from one another by irregularly built walls. Here, arranged like figures on a checker-board, were patches of squash,

onion, chili-pepper, melons and pumpkins, and beyond these were numberless round and square corrals made of bare posts and sticks of juniper and pine. In some of these enclosures burros and sheep were confined, and a number of hobbled burros were to be seen in every direction, wherever the eye

TSNA-HAY, "ZUNI DICK"

rested. Hobbling a burro means tying his front legs together at the ankles with a stout thong of buckskin. This enables the animal to move about and pick up what forage he can find; and at the same time it makes traveling difficult, so that he cannot stray away from home. There were more dogs than burros, and of all the slinking, scrawny, vicious-looking crea-

tures, these certainly surpassed anything I had ever seen. Wallowing in several mudholes by the side of the stream were some black hogs, which scurried away with swift feet and disapproving grunts when we approached. As we came nearer we were surprised to find a number of eagles confined in rude cages made of sticks, which occupied various corners of the housetops.

We went directly to the house of Tsna-hay, commonly called "Zuni Dick," who greeted us kindly in broken English, and seemed especially glad to see his old friend, Dr. James. It did not take long to allot us our quarters. We girls were lodged in the house of Pa-lo-wah-ti-wa, whose grandfather, we afterwards learned, was one of the noted governors of Zuni. Two of the boys and Dr. James stayed at Dick's, while Professor and Mrs. Young and the other boys were accommodated in nearby houses.

As we were to stay here for several days, definite arrangements were made as to meals, so that we could give as much time as possible to sight-seeing. Surely now, if never before, we were in a foreign land. The architecture was strange; the little naked boys and girls, strange; the kangaroo-like jump of the hobbled burros was strange; and as we climbed to the top of the big pyramid house, things seemed to grow stranger still. In one place we saw a woman making pottery; close by, a woman was sweeping a floor with the quaintest little bunch of broom-corn in her hand; while a little distance away, another woman was washing the hair of her husband or son

in a bowl that seemed full to overflowing of light suds or lather. On the next story a man squatting against the wall was sewing a pair of moccasins. Every few moments, naked children, like living bronze statues, darted in and out of the doorways or popped their heads through the ladderways and immediately darted or popped back again, as if half afraid of us.

We saw so many things of interest that delayed us as we climbed that it seemed as if we should never reach the top. And when we did reach there, the impression of being in a strange land was much stronger than it had been before. The strange building, with its peculiar terraced architecture, funny chimneys, obtrusive ladder poles and funny little flights of steps between stories, looked like a Chinese puzzle, and the streets and alley-ways which surrounded it at the base only added to the puzzle effect.

Beyond the house, radiating like spokes of a wheel—the spokes, however, made of sticks which bent "every-which-way"—were numberless trails that led the eye to the walls of rock that seemed to hem in this valley on every hand. The rocks formed a rude circle, the rim of the cart-wheel of which the hub was the great house on which we stood.

Suddenly a sweet and musical voice arose as if someone were making an announcement. Looking in the direction of the voice, we saw, standing on the roof of one of the houses detached from the main building, an upright figure with blanket wrapped tightly around him, melodiously making announce-

ments to all the people. We afterwards learned that this was the governor's herald, instructing the people as to the ceremonies or duties that must be performed on the morrow.

That night we were all invited to go down into the underground sacred *kivas* where one of the medicine men was to tell us of the distribution of the different animals throughout the earth. To make this story clear, Dr. James gave us the following introductory explanation, which he says forms part of a wonderfully interesting monograph on "Zuni Fetiches," which appears in one of the reports of the Bureau of American Ethnology. Said he:

"The Zuni Indians have a very peculiar and interesting philosophy, according to Cushing, which accounts for and explains some most interesting fetiches, which are very common amongst them. The highest philosophy of which we are cognizant recognizes the 'Universal Kinship,' and the 'Cosmic Consciousness' is already believed in by thousands of intelligent people, as well as followers of Emerson and Whitman. In a way, the Zunis believe in this universal relationship, not only of the sun, moon, stars, sky, earth and sea, but all plants, animals, men, and every inanimate object. Though they believe these objects have an all-conscious and inter-related life, the degree of relationship seems to be determined largely by the degree of resemblance.

"To them, man is the least mysterious and most dependent of 'all things,' hence he is the lowest. Anything that in any way, actually or in imagination, resembles him, is believed to be related to him, and

correspondingly mortal and low in the scale. Everything that is mysterious, strange and incomprehensible to him, on the other hand, is regarded as further advanced than himself, powerful and immortal. The animals, being mortal and possessing similar physical functions and organs, are closely related to man; but, on the other hand, as they possess specific powers and instincts that man does not possess, and at the same time have an element of the mysterious in them, they are regarded as nearer to the gods than man. The phenomena of nature, being still more mysterious, powerful and immortal (that is, they are exercised all the time, while man is born and dies, and thus is mortal) are more closely related to the higher gods than the animals; yet they are nearer to the animals than are the higher gods, because their manifestations often seem to resemble the operations of the animals.

"Hence we see in the Zuni philosophy of things the following order:

The Higher Gods,
The Phenomena of Nature,
The Animals,
Man,

the animals and the phenomena of nature forming links between the powers below them and the powers above.

"The phenomena of nature are all personified, and are given animal personalities that most nearly correspond to their commonest manifestations. For instance, lightning is given the form of a serpent, with or without the arrow-pointed tongue, because

its course through the sky is serpentine, and its stroke, like that of the serpent, instantaneous and destructive. Yet, strange to say, it is named not after the name of the serpent, but after its most obvious trait, viz., its gliding, zigzag motion.

"It can thus be seen that the Zuni man regards the serpent as his superior, because to him, it is more mysterious than himself and is more nearly related to the lightning, which is a step still higher.

"Following this chain of reasoning, it can well be seen that the Zuni gods, the 'Master Existences,' are supposed to be more closely related to the personalities of the phenomena of nature than to either animals or men. The latter two are close by, mortal, and not so very mysterious, whereas the 'Creators and Masters' are far away, remote in time, immortal, and only vaguely known. They are all given forms, however, either of animals (which forms also personify the powers of nature), of monsters compounded of man and beast, or of man. The animal gods form by far the largest class.

"The Zunis have no words to signify 'gods.' The nearest terms they possess are words that signify 'Surpassing Beings'—Creators and Masters, and 'All Fathers'—beings who are superior to all others in wonder and power, and who are the 'Makers' and the 'Finishers' of existence.

"Living men are called 'Done Beings'—from the words that signify 'done, cooked, baked, or ripe'; and when they die they are called 'Finished Beings'—from the words signifying 'made' or 'finished.'

"It will be seen, therefore, that there is not so vast a difference between these orders of life; and each being related to the one above and the one below it, the Zuni realizes a close connection between himself and the highest powers. The nearest he comes to recognition of God is in his mythology, where there are beings, godlike in attributes and power, anthromorphus, monstrous, elemental, who are known as the 'Makers or Finishers of the Paths of Life.' The Sun, the most superior of all, is called 'The Holder of the Paths.'

"From the sun downwards to man, all these beings and personalities (even those of nature) are called 'Life Beings,' and because *all* have the same general name, the Zuni instinctively believes that they are all of one blood,—one family.

"Feeling, however, as he does, that the animals are nearer to himself than either the phenomena of nature or the higher gods, and that they may and can act as mediators between himself and the higher powers, it is perfectly natural that his worship should be largely addressed to animals. And here another peculiarity of his mental processes is observed, viz.: Being unable to recognize the difference between the objective and the subjective, he establishes relationships between natural objects which resemble animals and the animals themselves. He even imitates these animals for the purpose of establishing such relationships between himself and the animals and the natural phenomena they signify; and he thus provides himself with a conventional art for purely religious purposes.

"In his selection of animals to act as mediators between himself and the higher powers, he naturally chooses those which supply him with food and useful material, as skins for clothing and foot-gear, gut for bow-strings, etc. But more important still to him are those animals that prey upon these useful and food animals. If he can propitiate these latter and gain their spirit and power, he will never lack for food, etc.; and this is one of the great objects of his prayer. Hence he calls the representations of these objects of his worship,—these fetiches,—*Wé-ma-we,* or Prey Beings.

"The fetiches highly valued by the Zunis are natural concretions which bear a resemblance to one of the animals or representations worshiped, and these resemblances are often artificially heightened. The most valued of all, however, are sometimes highly carved, but, by their high polish and dark patina, are clearly of great antiquity. They have been found around the ruins of ancient pueblos, or have been handed down for many generations. All these concretions, whether in their original or improved condition, are supposed by the Zunis—and their *A'-shi-wa-ni,* or medicine men, clearly teach such as the fact—to be either actual petrifactions of the animals they represent, or were such originally.

"By a strange course of reasoning, the Zunis believe that the fetiches, though of stone, possess all the qualities of body and spirit inherent to the animals when alive. For instance, the heart of the mountain lion has a spirit of conscious power over the antelope, deer and other animals that he hunts;

his breath, which comes from this magical power of the heart, breathed in the direction of the prey, whether near or far, strikes their hearts and causes their legs to stiffen and their bodies to lose their strength; and his cry, which is his magical medicine of destruction, charms the senses of his prey. The fetich has the same power, they believe; for, though the person of the lion is stone, his heart still lives, and these powers are derived from the living heart.

"Hence they have a large number of fetiches, one for each of the six world regions, and the reason for these is explained in the legend which I have asked our Zuni friend to tell you."

We now turned to the Zuni *shaman,* and listened as he talked and Tsnahay translated.

How I wish I had the power to paint a picture of our story-teller as we sat in this underground chamber, squatted around the little fire which burned on the hearth at the foot of the ladder, through the hatchway of which we could catch glimpses of the star-studded sky! With solemn dignity the story-teller talked, his bronzed and seamed face lit up every now and again, not only with the interest of his tale, but with the additional light cast when a few new sticks were put upon the fire. We, the product of the later American civilization, sat around him, while beyond us sat and stood a listening throng of Zuni young men and old, who seemed as much interested in the story as if they had never heard it before.

Each of the six regions has its own prey animal, who is also the guardian of that region, as follows:

the Mountain Lion, of the North, because his coat is yellow and the light of the North is yellow; the Black Bear, to the land of Night, the West; the Badger, of ruddy skin, the land of Summer, the South; the White Wolf, to the land of the Dawn, the East; the Eagle, to the upper regions, for he flies through the air without tiring, and his coat is speckled as is the sky with clouds; the Mole, to the lower regions, for he burrows through the earth, and his coat is black, as are the holes and caves of the earth. The Mountain Lion is the master of all the gods of prey, because he is stout of heart and strong of will.

The fetiches representing all these animals are kept in great veneration by the Zuni medicine priests, and when a member of one of their societies wishes to go hunting he comes and, with much prayer and ceremony, takes out the fetich he needs for the direction he intends to hunt in and the prey he seeks to obtain.

This is their story about the distribution of the animals: When men began their journey on the earth it was from the Red River. The wonderful family of the Snail People caused, by means of their magic power, all the game animals in the whole world round about to gather together in the forked canyon-valley under their town, where they were securely hidden from the rest of the world.

The walls of this canyon were high and insurmountable, and the whole valley, although large, was filled full of the game animals, so that their feet rumbled and rattled together like the sound of distant thunder, and their horns crackled like the sound of a

storm in a dry forest. All round about the canyon these passing wonderful Snail People made a line of magic medicine and sacred meal, which road, even as a corral, no game animal, even though great Elk or strong buck Deer, could pass.

Now, it rained many days, and thus the tracks of all these animals tending thither were washed away. Nowhere could the Ka-ka, or the children of men, although they hunted day after day over the plains and mountains, on the mesas and along the canyon-valleys, find prey or trace of prey.

Thus it happened that after many days they grew hungry, almost famished. Even the great strong Sha-la-ko and the swift sa-la-mo-pi-a walked zigzag in their trails, from the weakness of hunger. At first the mighty Ka-ka and men alike were compelled to eat the bones they had before cast away, and at last to devour the soles of their moccasins and even the deer-tail ornaments of their dresses, for want of the flesh of the game animals.

Still, day after day, though weak and disheartened, men and the Ka-ka (Zuni ancient mythical beings) sought game in the mountains. At last a great Elk was given liberty. His sides shook with tallow; his dew-lap hung like a bag, so fleshy was it; his horns spread out like the branches of a dead tree; and his crackling hoofs cut the sands and even the rocks as he ran westward. He circled far off toward the Red River, passed through the Round valley, and into the northern canyons. The Sha-la-ko was out hunting. He espied the deep tracks of the Elk and fleetly followed him. Passing swift and

strong was he, though weak from hunger, and ere long he came in sight of the great Elk. The sight gladdened and strengthened him; but alas! the Elk kept his distance as he turned again toward the hiding-place of his brother animals. On and on the Sha-la-ko followed him, until he came to the edge of a great canyon, and, peering over the brink, discovered the hiding-place of all the game animals of the world.

"Aha! so here you all are!" said he. "I'll hasten back to my father, Pa-u-ti-wa,* who hungers for flesh, alas! and grows weak." And like the wind the Sha-la-ko returned to Kó-thu-el-low-ne. Entering, he informed the Ka-ka, and word was sent out by the swift Sa-la-mo-pi-a† to all the We-ma-a-ha-i for counsel and assistance, for they were now the fathers of men and the Ka-ka. The mountain Lion, the Coyote, the Wild Cat, the Wolf, the Eagle, the Falcon, the Ground Owl, and the Mole were summoned, all hungry and lean, as were the Ka-ka and the children of men, from want of the flesh of the game animals. Nevertheless, they were anxious for the hunt, and moved themselves quickly among one another in their anxiety. Then the passing swift runners, the Sa-la-mo-pi-a, of all colors,—the yellow, the blue, the red, the white, the many colored, and the black,—were

---

* The chief god of the Ka-ka, now represented by masks and the richest costuming known to the Zunis, which are worn during the Winter ceremonials of the tribe.

† The Salamopia are monsters with round heads, long snouts, huge feathered necks, and human bodies. They are supposed to live beneath the waters, to come forth, or enter snout foremost. They also play an important part in the Ka-ka or sacred dances of Winter.

summoned to accompany the We-ma-a-ha-i to the Snail People. Well they knew that passing wonderful were the Snail People, and that no easy matter would it be to overcome their medicine and their magic. But they hastened forth until they came near to the canyon. Then the Sha-la-ko,‡ who guided them, gave directions that they should make themselves ready for the hunt.

When all were prepared, he opened by his sacred power the magic corral on the northern side, and forth rushed a great buck Deer.

"Long Tail, the corral has been opened for thee. Forth comes the game; seize him!" With great leaps the Mountain Lion overtook and threw the Deer to the ground, and fastened his teeth in his throat.

The corral was opened on the western side. Forth rushed a Mountain Sheep.

"Coyote, the corral has been opened for thee. Forth comes thy game; seize him!" The Coyote dashed swiftly forward. The Mountain Sheep dodged him and ran off toward the west. The Coyote crazily ran about, yelping and barking after his game, but the Mountain Sheep bounded from rock to rock and was soon far away. Still the Coyote rushed crazily about until the Mountain Lion commanded him to be quiet. But the Coyote smelled the blood of the Deer and was beside himself with hunger.

‡ Monster human-bird forms, the warrior chiefs of Pautiwa, the representatives of which visit Zuni, from their supposed western home in certain springs, each New Year. They are more than twelve feet high, and are carried swiftly about by persons concealed under their dresses.

Then the Mountain Lion said to him, disdainfully: "Satisfy thy hunger on the blood I have spilled, for today thou hast missed thy game; and thus ever will thy descendants like thee blunder in the chase. As thou this day satisfiest thy hunger, so also by the blood that the hunter spills on the flesh that he throws away shall thy descendants forever have being."

The corral was opened on the southern side. An Antelope sprang forth. With bounds less strong than those of the Mountain Lion, but nimbler, the Wild Cat seized him and threw him to the ground.

The corral was opened on the eastern side. Forth ran the O-ho-li—the Albino Antelope. The Wolf seized and threw him. The Jack Rabbit was let out. The Eagle poised himself for a moment, then swooped upon him. The Cotton Tail came forth. The Prey Mole waited in his hole and seized him; the Wood Rat, the Falcon made him his prey; the Mouse, and the Ground Owl quickly caught him.

While the We-ma-a-ha-i were thus satisfying their hunger, the game animals began to escape through the breaks in the corral. Forth through the northern door rushed the Buffalo, the great Elk, and the Deer, and toward the north the Mountain Lion and the yellow Sa-la-mo-pi-a swiftly followed and herded them to the world where stands the yellow mountain, below the great northern ocean.

Out through the western gap rushed the Mountain Sheep, herded and driven by the Coyote and the blue Sa-la-mo-pi-a, toward the great western ocean, where stands the ancient blue mountain.

Out through the southern gap rushed the

Antelope, herded and driven by the Wild Cat and the red Sa-la-mo-pi-a, toward the great land of Summer, where stands the ancient red mountain.

Out through the eastern gap rushed the Albino Antelope, herded and driven by the Wolf and the white Sa-la-mo-pi-a, toward where "they say" is the eastern ocean, the "Ocean of Day," wherein stands the ancient white mountain.

Forth rushed in all directions the Jack Rabbits, the Cotton Tails, the Rats, and the Mice; and the Eagle, the Falcon, and the Ground Owl circled high above, toward the great "Sky ocean," above which stands the ancient mountain of many colors; and they drove them over all the earth, that from their homes in the air they could watch them in all places; and the Sa-la-mo-pi-a of many colors rose and assisted them.

Into the earth burrowed the Rabbits, the Rats, and the Mice, from the sight of the Eagle, the Falcon, and the Ground Owl; but the Prey Mole and the black Sa-la-mo-pi-a thither followed them toward the four caverns of earth, beneath which stands the ancient black mountain.

When the earth and winds were filled with rumbling from the feet of the departing animals, the Snail People saw that their game was escaping; hence the world was filled with the wars of the Ka-ka, the Snail People, and the children of men.

Thus were let loose the game animals of the world. Hence the Buffalo, the great Elk, and the largest Deer are found mostly in the North, where they are ever pursued by the great Mountain Lion; but with

them escaped other animals, and so not alone in the North are the Buffalo, the Great Elk, and the Deer found.

Among the mountains and the canyons of the West are found the Mountain Sheep, pursued by the Coyote; but with them escaped many other animals, hence not alone in the West are the Mountain Sheep found.

So, for the same reason, that other animals escaped in the same direction, while we find toward the South the Antelope, pursued by the Wild Cat; toward the East the Albino Antelope, pursued by the Wolf; they are not found there alone.

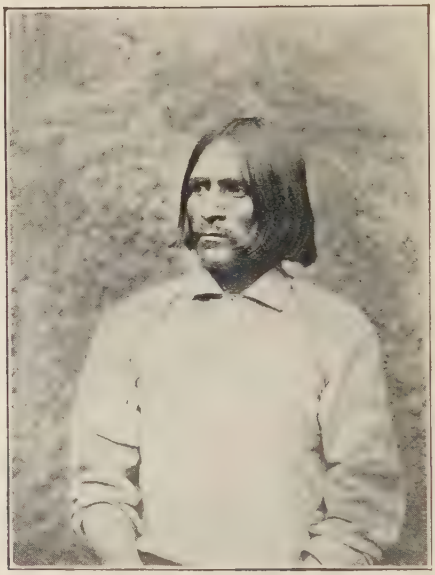
In all directions escaped the Jack Rabbits, Cotton Tails, Rats, and Mice; hence over all the earth are they found. Above them in the skies circle the Eagle, the Falcon, and the Ground Owl; yet into the earth escaped many of them, followed by the Prey Mole; hence beneath the earth burrow many.

Thus, also, it came to be that the yellow Mountain Lion is the Master Prey Being of the North; but his younger brothers—the blue, the red, the white, the spotted, and the black Mountain Lions—wander over the other regions of earth. Does not the spotted Mountain Lion [evidently the Ocelot] live among the high mountains of the South?

Thus, too, was it with the Coyote, who is Master of the West, but whose younger brothers wander over all the regions; and thus, too, with the Wild Cat and the Wolf.

Thus the Zunis explain the special distribution of the Prey animals and their prey throughout the

six regions, and also why other animals are found in those regions in which, according to the special classification, they should not occur.



ZUNI NICK, WHO WAS ONCE HANGED BY THE THUMBS AS A WIZARD

BELIEVERS IN WITCHCRAFT

Just as we were leaving the *kiva* and about to retire for the night, Dr. James laughingly cautioned us to beware of the witches. And then we remembered that we were in the homes of people who earnestly and sincerely believe in witchcraft, and who, within the last few years, have severely punished, almost to

death, certain of their men and women who had been deemed guilty of following this heinous practice.

In the morning before we had breakfast we were taken over to the home of "Nick," who, though a full-blooded Zuni, spoke English as well as we did. He was educated by Mr. Graham, an Indian trader,

THE HOUSE OF WEWA, ZUNI, N. M.

who for many years lived at Zuni, and who adopted Nick in his childhood. As we returned to breakfast, Dr. James quietly remarked: "You would not believe that that man was a witch, would you?"

In amazement, we all exclaimed "No!"

"Yet," said he, a few years ago Nick was accused of being a witch, or, as we would say, using the masculine form of the word, a wizard. They arrested,

tried, condemned, and undoubtedly would have killed him had it not been for the intervention of Mr. Graham and his other white friends."

We were then taken to the home formerly owned by Wewa, one of the most remarkable women of the Zunis of the last generation. She was so bright and

WEWA, THE ZUNI WOMAN WHOSE DEATH WAS SAID TO HAVE BEEN CAUSED BY WITCHCRAFT

intelligent, and such an excellent weaver, that President Cleveland invited her to Washington, where she remained as his guest for a number of days. She took with her one of the primitive looms of the Zunis, which was set up on the White House lawn, and there she wove several of her beautiful native robes for Mrs. Cleveland. She remained six months

in Washington, making friends with Speaker Carlisle and many others. She was the tallest person among the Zunis, and all who knew her regarded her as the strongest, both mentally and physically. She had an excellent memory, not only for the lore of her people, but of all the things she saw and heard in the outside world. Her energy was indefatigable, all the hard work of her household being left for her to do.

When she died there was great weeping among the Zunis, and Nai-u-chi, the chief priest of the Order of the Sacred Bow (one of the most important religious organizations of the tribe) deemed her death owing to witchcraft. A poor old woman named Melita was accused of the crime, and she was duly arrested and hung up by the wrists and thumbs to make her confess. While in this agonizing position, Nai-u-chi and his two associates, Ne-mo-si and Hay-tot-si abjured her to acknowledge her wrongdoing and then suffer the penalty in meekness. But she refused.

Dr. James happened to appear in the village on the day that Melita was suspended, and his presence arrested the progress of her punishment. Learning of the event, he began a search for the poor old woman, and, finding her in one of the topmost rooms of the large community house, with her back all raw and bleeding from the cruel scourgings she had received; her wrists cut through with the rawhide *riata* by which she had been hung; and her cheeks swelled and torn by the bursting of blood-vessels under her eyes, he determined to protect her

from further assault and injury. The teachers of the Government school kindly attended to the poor creature's wounds and other physical necessities, and he spoke strong words on her behalf to the priests who had conducted her trial. When he asked Melita

MELITA, THE OLD WOMAN ACCUSED OF HAVING BEWITCHED WEWA, ZUNI, N. M.

who had been guilty of beating her so cruelly, she said "Hay-tot-si! Hay-tot-si!" When she had refused to confess, this zealous and fanatical medicine man had torn her clothes from her back and scourged her, calling upon her to acknowledge her evil practices. We went to see Melita, and, though

it was some time since her rescue, the glad way in which she welcomed her white friend showed that she remembered and fully appreciated what he had done for her in the days of her distress.

RETURN TO GALLUP

I COULD easily fill three books with what we saw, heard and felt at Zuni, but my space is too limited to write more. We returned to the railway at Gallup and there visited the coal mines—for it is a great coal region—and also met quite a number of Navaho Indians at the store of C. N. Cotton, one of the noted traders of the country, who has a fine statue of Manuelito, the last great war-chief of that tribe, over the entrance to his store. This figure was sculptured by the eminent artist McNeil, whose work has already gained him world fame and some degree of fortune.

We also saw one of the most remarkable geological formations it has been our good fortune to witness, even in this country of interesting formations. It occurs about half a mile east of Gallup, and the Santa Fe railway passes directly through it. This is an upturned wall of cretaceous sandstone, etc., in a monoclinal flexure, some of the strata being tilted almost to the perpendicular. This monocline has been called the Nutria monocline, because it first appears at the village of Nutria, which we passed on our return from Zuni, and it has long engaged the interested attention of our most observant geologists. All the way from Grants to Gallup, along the railway

are most interesting masses of rock, great cliffs terminating north of the railway, some of them carved and sculptured into rude pyramids, towers, spires and pinnacles. One of these, the Navaho church, is a very noticeable object to the traveler on the trans-continental railway.

IN THE PETRIFIED FOREST, ARIZONA

ADAMANA AND THE PETRIFIED FOREST

Our next point of interest was the Petrified Forest, and to reach this we left the train at a little side station, some twenty miles east of Holbrook, known as Adamana.

We wondered where it could have found so

strange a name. Dr. James then explained: "There used to live on a cattle-ranch, near by, an old Arizona pioneer named Adam Hanna. I have often rambled over the country with him and visited the great natural wonder which we are now about to see. When the Santa Fe Railway finally decided that they would stop their trains here to give transcontinental travelers an opportunity to visit the Petrified Forest, and they questioned what to call the station, it was suggested that they link together the two names of the old pioneer, which was accordingly done."

The Petrified Forest is certainly one of the "wonders of the world." It is an area over ten miles square, covered with fallen trees, generally broken into somewhat irregular lengths, scattered in all conceivable positions and in fragments of all sizes, the sections varying from two to twenty feet long, and in some places piled up and looking almost like a lot of children's cart-wheels jumbled up together.

This Petrified Forest area is about twenty miles from Holbrook, Apache County, and while it is all one area, it is naturally subdivided into three parts, commonly known as the "Petrified Forest," "Chalcedony Park," and "Lithodendron (stone trees) Valley." The latter section is nearest to the little hotel at Adamana, kept by an obliging successor of the old pioneer—Al Stevenson by name. Here we were kindly received and hospitably entertained. While Mr. Stevenson prepared the teams to take us out to the forest, his wife provided us with an excellent breakfast.

OUT TO THE PETRIFIED FOREST

The drive was only five miles out, and part of it was over a sort of plain, although there were rugged cliffs to be seen in the distance. We finally reached these bluffs and found that Lithodendron Valley is between two of them. As we drove along we saw all kinds of freaks of erosion in the peculiar colored soil of which these bluffs are made. One looked much like an eagle with outspread wings. At last we came to the petrified trees. There were literally hundreds of thousands of specimens scattered on each side of the valley and up and down the slopes. The valley is scarcely half a mile wide, and there is practically no vegetation, the soil being composed mostly of clay, sand and volcanic ash. The further we went, the greater the quantity of specimens found, until at last we were surrounded literally by millions of pieces. Some of the fossil trees were well preserved. The exposed part of some of them measured from one hundred and fifty to two hundred feet in length and from two to four and a half feet in diameter. The roots of some were fully exposed, and the diameter of some of these portions is not less than ten or twelve feet.

We picked up one piece after another, only to drop them for pieces more desirable, for the colors are simply beautiful and exquisite in the extreme. The state of mineralization in which much of the wood exists almost places certain pieces among the class of semi-precious stones. Not only are chalcedony and agates found among them, but many ap-

proach the condition of jasper and onyx. So hard is the material that there was once a factory started for the purpose of grinding up these logs and converting them into emery wheels, which were of the finest and most useful quality.

At the World's Fair held in Chicago there were a number of beautiful specimens, highly polished, and they were more beautiful than any agate or marble. One exhibit was of a very large fireplace and mantel, the richness of which it is scarcely possible to conceive. There were also table-tops, clock-cases, pedestals, paper-weights, etc., and the high polish revealed the marvelously brilliant colors.

THE PETRIFIED BRIDGE

On the other side of one of the slopes we came to the interesting Petrified Bridge. This consists of a great petrified tree-trunk lying across a canyon and forming a natural foot-bridge on which men may easily cross. Our guide has ridden across it on a horse. This bridge is on the northeast side of one of the "mesas" near its rim. The trunk is in an excellent state of preservation and is complete to the base, where it is partially covered, though it shows clearly the manner in which the roots were attached while the tree was still growing. The total length of the tree that is exposed is one hundred and eleven feet, and as the canyon across which it lies measures at this point exactly forty-four feet between the points on which the tree rests, more than sixty feet of the upper part of the tree lies out upon the

left bank of the canyon. At about the middle of the canyon the tree measures ten feet in circumference, giving a diameter of about three feet. Its diameter at the base is about four feet, and at the extreme summit is reduced to about eighteen inches. It is

THE PETRIFIED BRIDGE, ARIZONA

possible that the tree when growing measured one hundred and seventy-five or two hundred feet in height.

As the accompanying photograph shows, most of the trees have been split across into sections or blocks. There are four of these transverse cracks in the tree of the petrified bridge.

Several scientific and other writers have stated that there are a number of stumps to be found

standing erect, with their roots in the ground, showing that they were growing and were buried and petrified on the spot. But those who have rambled over these forest areas many times during the past thirty years say they have not found a single tree stump so situated.

We brought our lunch with us, so that we might spend the whole day in the forest, and after we had eaten heartily, our friendly guide told us an amusing story of an old Arizona pioneer who became so enthusiastic over the wonders of Arizona that he decided to go back East and deliver lectures on the natural wonders and marvels of this interesting land.

When he came to describe the petrified forest, this was the way he did it: "Yes, ladies and gentlemen, aout yonder in Arizony thar's a wonderful forest, whar the trees is a gro'in' jess the same as they did centuries ago, but a-a-a-l-l pewtrefied. And, ladies and gentlemen, the roots of them thar trees is a gro'in' away down in the graound, jess the same as they did centuries ago, but a-a-a-a-l-l-l pewtrefied; and the branches of them thar trees is a grow'in' jess the same as they did centuries ago, but a-a-a-a-a-l-l-l-l pewtrefied; and flyin' araound in them thar branches and throu the pewtrefied air is a number of pewtrefied byrds asingin' pewtrefied songs."

"Come! Come!" exclaimed a startled gentleman in the audience. "My dear sir, what do you mean by making such an outrageous statement as that? Petrified birds flying through petrified air, singing petrified songs? My dear sir, what becomes of the law of gravitation?"

"Oh, stranger, don't let that consarn you!" exclaimed the ready Arizonian, "aout thar the law of gravitation is pewtrefied, too!"

Some of us were very anxious to learn how this Petrified Forest came into existence and we listened with much interest to the explanation that was given.

Many, many millions of years ago, in the far away dim ages of what geologists call triassic and mesozoic times, these trees grew, just as trees grow in our forests today. Evidently the climatic conditions were such in those far away early days as to be highly suitable for tree growth, or these great trees could never have attained the height and size in which we find them. Those were the days in which the world was in the process of making, and earthquakes, uplifts, and subsidences of the earth's surface were much more common than they are now, since the crust of the earth has become more stable. In some convulsion of Nature—possibly a great tornado or flood—the whole forest-area where these trees grew was flooded to such an extent and for so long a period of time that the roots of the trees rotted and allowed the trees to fall, or else the flood was so tremendous in force that it washed away the earth around the tree-roots and tore up the trees themselves, floating them away from the place where they grew to this region where we now find them. The reason we assume they were thus carried away from the place where they originally grew is the fact that the most careful searching has failed to find few, if any, branches of the trees, and but very few of the cones that they used to bear. It is assumed, therefore, that

the branches were broken off by the turbulent movements of the flood, and that when the daming up of the course of the stream occurred, which located the trees where we now find them, the lighter branches and cones were carried away on the surface of the swirling waters.

Thus lodged in a place where they could not escape, indications point to the fact that all the trees were now submerged in water for many, many centuries. The land surrounding the area of submergence undoubtedly contained many minerals, and as these were exposed to the atmosphere and disintegrated and rusted, they colored the water in which the trees were lying. It is well known that iron rust is a deep red; copper gives brilliant yellows and purples, while other minerals give equally vivid and beautiful colors. Combined with the color-giving minerals was a good deal of silica or lime, also held in solution in the water. By the exercise of that wonderful law, called capillary attraction, the wood fiber, as it decayed and washed away, left place for the water charged with lime and the brilliant coloring matters. Day by day, week by week, month by month, year by year, century by century, the process of change from wood fiber to solid stone, beautifully colored, thus took place, until all the wood fiber was gone and nothing but stone left in its place.

In the meantime, there were great volcanic disturbances in this region, and vast quantities of volcanic ash were cast out over the whole area of this forest, until finally the trees were buried in it, many feet deep. Then, as more millions of years slowly

wore away, the region sank until sandstones, limestones, more sandstones and more limestones were washed over the area and deposited until the forest was buried, some scientists say, to a depth of over twenty thousand feet.

Then this period of subsidence was arrested and reversed. Mother Nature now began to lift the area again out of the great inland sea where all these layers of sandstone and limestone had slowly been accumulated and deposited, and the Petrified Forest region began to emerge higher and higher. But this must have been a time of great storms and atmospheric conflicts, for little by little, these sandstones and limestones that had so slowly and patiently accumulated were disintegrated and carried away, probably to form the sands of the Mohave and Colorado Deserts of Southern California. Finally, previous to our own historic age, this process of disintegration and washing away of the accumulated strata of the Petrified Forest region was arrested, just at the exact time required to leave these trees exposed to man's vision.

While the forest is now a National Park and thus guarded from vandalism by the government, there are so many millions of fragments scattered about on every hand that no objection is made to visitors taking away small specimens. So we all brought away several pieces, all of which are now prized as precious mementoes of our fascinating and instructive trip.

HOLBROOK AND WINSLOW

LEAVING Adamana, we soon reached Holbrook, which is one of the growing towns of this portion of Arizona. Nearby are several Mormon settlements, and it and Winslow, the next good-sized town, are both cen-

SANTA FE TRAIN CROSSING CANYON DIABLO, ARIZ.

ters for sheep—and cattle—men and miners. Winslow is also a railway town, one of the divisions terminating here. From this latter place we gained our first fine view of the San Francisco peaks, hovering over the town of Flagstaff, and on the shoulder of which the Lowell Observatory is located. But before reaching Flagstaff we stopped at Canyon Diablo—

the Canyon of the Devil—so-called by the travelers who found its two hundred and twenty-five feet of depth and five hundred and fifty feet of width impossible to cross without a bridge, wearisome to go around. It is a faint and insignificant suggestion of what a real large canyon is, but until one has seen something so much more stupendous as to dwarf it into insignificance it seems to be a very profound and awful gash in the earth's surface.

Here we were cared for by Mr. F. W. Volz, who had undertaken to drive us out to Meteorite Mountain and then send us with his teams to Hopiland, where we were to see the thrilling Snake Dance of the Hopi Indians.

Standing in Mr. Volz's doorway and looking to the southeast, we saw, ten miles away, what appeared to be a low, flat mountain. This, we were told, is the famous Meteorite Mountain, from which a great number of meteorites have been secured, and around which a great deal of scientific and other controversy has been waged. It was decided that we should visit this interesting geological formation before we started for the Hopi Country.

A wagon was provided and some saddle horses, and happy and merry as usual, we reached the mountain. Climbing up its western slope, we found that it was only about two hundred feet high and that the top formed the rim of an immense round bowl-shaped hole in the ground. This hole has almost perpendicular sides and is a mile wide and over six hundred feet deep. Originally it was undoubtedly much deeper than it now is but rocky debris has washed in

and helped to fill it up. The bottom of the hole has a floor of about forty acres of level ground.

Some people have imagined that this was an extinct crater, but the latest scientific dictum is that it was formed by the falling of a monster meteorite, which buried itself in the ground at this spot. Undoubtedly after striking the earth, the meteorite exploded, as there have been about ten tons of meteorites, varying in size from a fraction of an ounce to over a thousand pounds in weight, scattered over a radius, the circumference of which is eight miles away from the mountain. The largest masses were found at the greatest distance.

These meteorites were also found to contain diamonds. The discovery of these diamonds came about in the following manner: The first known piece of the meteorite was picked up by a Mexican sheep herder. Owing to its great weight and shining qualities, he imagined it to be silver, but in attempting to dispose of it, he learned his mistake. A white prospector afterwards filed upon the mountain, claiming that it was pure iron, and in his attempt to dispose of the "ore," pieces of the meteoritic iron were sent east and there fell into the hands of Dr. Foote of Philadelphia, the well known geologist, who pronounced it meteoritic and of celestial origin. In cutting a section of this sample, Dr. Foote found that his tools were injured by something vastly harder than the elements of which the meteorite was supposed to be composed. He, therefore, tested the specimen chemically and to his amazement discovered that it contained black and transparent diamonds. This ex-

periment was afterwards verified by other experts who found that three kinds of diamonds were present. And since this time a search for diamonds in meteorites has occupied the attention of chemists all over the world.

Sometime ago a company of scientific men located several mineral claims on Meteorite Mountain and finally obtained a patent from the government for the land. Their object was two-fold; primarily to solve the mystery, if possible, and secondly, to appropriate anything valuable that might be found. A shaft nearly two hundred feet was sunk, when a strong flow of water was encountered, which temporarily obstructed the work. A gasoline engine and drill were then secured and put in operation, and further drilling continued until another obstacle arrested further progress. So far, nothing of scientific interest has been discovered, though the workmen found two fair-sized meteorites, weighing one hundred and one hundred and fifty pounds respectively, near the surface.

ON THE WAY TO THE HOPIS AND THEIR SNAKE DANCE.

The next morning we left Canyon Diablo for Oraibi, the most western of the seven villages of the Hopi, in two four-horse wagons. In the far distance we could see the Mogollon Buttes—the eroded remnants of the great Mogollogon Plateau that used to occupy this vast area. They seemed very ethereal and dream-like, but as we drove further north their solidity and stability was rendered very evident.

Professor Young jokingly asked Dr. James if he could not arrange to give us a series of remarkable

desert sensations on this trip, and the latter readily responded that we could have all we wanted. Little did either of them think that we were going to have as many experiences as we did have. Although the sky was cloudless and perfectly clear, a storm must have been brewing somewhere, for that night after we camped on the western side of the Little Colorado River at Volz's Crossing and had had our supper, the clouds began to invade the sky. There was only one solitary tree and we girls were placed under it with Professor and Mrs. Young near by as our guardians. The boys spread their blankets out where fancy dictated, while Dr. James made his sleeping place under the tail end of the wagon.

We could not have been sleeping more than two hours before it began to rain and, with his usual thoughtfulness, our kindly guide ran around to each sleeper to see that our blankets were covered with waterproof canvas. I suppose I must have been somewhat uneasy in my sleep and in turning had pushed my foot outside the blankets. All at once I was awakened by the feel of something wet touching my foot and looking up, my eyes fell upon what seemed to be a monster figure bending over my bed. Almost paralyzed, I still managed to let out a scream that was loud enough to "wake the dead." In a moment Professor Young's calm voice inquired, "What's the matter, girls?" It did not take long to make clear what had happened, namely: That in spreading the canvas over my blankets, the doctor's wet hand had touched my foot and caused the alarm.

We learned in the morning that the boys had

spent a wretched night. There being no shelter whatever for them, they had gathered together what wood they could and tried to keep alive a struggling little fire, huddling around it all night and longing for dawn.

No sooner was it light than preparations were made for breakfast, and at the same time we learned what a treacherous stream the Little Colorado River was. We could easily have crossed it the night before but, during the night, it had risen fully six or eight feet, and now there was no possible chance to cross unless the water subsided. This was what we first thought, but a short distance from where we camped Dr. James showed us where Mr. Volz had erected a cable crossing, and on the cable was suspended a cage, by means of which we could, if necessary, transport ourselves and our wagons to the other side. This plan was no sooner suggested than we sought its accomplishment. The cage was a heavy, clumsy affair and required a tremendous amount of muscular effort to pull it across, but the boys and the drivers worked like beavers, and it was not long before our wagons and supplies were on the other side. We were then taken across and watched with great interest the process of bringing across the horses. They could not be lifted up into the cage, so two of them were tied in front and two behind so that they would not obstruct each other when they began to swim. The boys then started the cage across and the horses, willy nilly, were compelled to follow. Their frantic endeavors to hold back before they reached the water were amusing and their desperate endeavors to get

to the other side when they did strike the water were equally amusing.

The lead animals of our wagon were two mules—magnificently developed creatures, quite as large as our wheel horses, which were above the usual size. When it came to getting the mules across, if the cage had not helped by its weight, pulling them along by gravity, I doubt whether they could have been made to enter the water. They held back with great stubbornness, but the weight of the cage and the pulling of the boys just "yanked" them along and as soon as they found themselves in the water they were in a bigger hurry than the horses were to reach the other side.

I forgot to tell about the practical joke Dr. James played upon us that morning at breakfast. The water of the Little Colorado River was thick with red mud so that it had the appearance of very rich chocolate. Knowing this, he placed a coffee pot full of it on the camp fire and when breakfast was ready, offered to serve us all with chocolate. Glad of the change from coffee, most of us accepted it. But after putting in the usual quantity of milk and sugar, it had a very peculiar taste, entirely different from any chocolate we had ever drunk. The Doctor sagely suggested that we put in a little more milk and sugar, which we did, though, naturally, it did not improve the flavor of the beverage any. At last the twinkle in the Doctor's eye and the smile on his face revealed that he was fooling us and then he explained to us that the "substantial body" of the Little Colorado River water was such that had we been willing to

partake of it, it would have supplied us with both "meat and drink."

The Little Colorado is always dangerous to strangers on account of these sudden uprisings and the further fact that its bed is a mass of quicksands. Horses and teams have been known to be swallowed up so quickly that the most vigorous endeavors at rescue were unavailing. His clothes being wet through, Dr. James waded into the stream a little way, in order to show us how uncertain the crossing was. Standing where the water was not more than a few feet deep, he gave his body a sudden jerk downwards, and almost immediately sank up to the middle. We were somewhat alarmed that he might find difficulty in extricating himself, but, throwing himself on his back towards the bank, he soon succeeded in pulling himself out.

Although we were somewhat bedraggled and wet, the sun was already shining brightly and our breakfast had made us feel cheerful, so it did not take us long to get ready to start. The rest of that day was beautiful. The rain had cleared the atmosphere and it had made the sand far more agreeable to travel over and we camped that night near "The Lakes," a small Navaho and Hopi Indian trading station about midway between Canyon Diablo and Oraibi.

AN ARIZONA RAINSTORM

Next morning after a breakfast on the half of a roasted mutton which had been purchased from the Navahoes the night before, the sky became overcast

with the most white, fleecy, and vividly beautiful clouds I had ever seen. They rolled, tumbled and tossed in the most fantastic and yet attractive style, but our drivers saw nothing in them to give them pleasure. One of them, a Mexican, said they meant "*Mucho agua*"—much water. And we found that what he said was true. We had not traveled more than an hour before the rain began to descend. At first it was a fierce shower and we thought we were having a terribly hard rainstorm. Our wagons, however, were protected by bows over which canvas was stretched, so that we were perfectly dry, although our drivers were on the outside and we could soon see that they were wet through. Little by little the storm increased in fury until, at last, as one of the boys said: "It was coming down in carload lots, freight paid." It fairly seemed to pour down in sheets, and in less than an hour's time, this dry, barren, desolate, sandy desert—that seemed as if it could swallow up all the moisture of the world—was almost entirely covered with water. At last our two mules refused to travel, and Dr. James decided to get out and take the lines. Giving his heavy four-horse whip to one of the boys, he got him to sit out on the dashboard and devote his attention, with the whip, to the lead mules, while he gave special attention to the "wheel" horses. The mules wanted to turn tail to the storm, but this was not the direction we wished to travel. For over two hours it was a constant struggle and battle between the men and the animals. Dr. James persisted in going ahead and the mules wished to return. Fred was kept busy, all the time, yelling at the

mules and occasionally touching them up with the whip, and in that fashion we progressed. The only way we could tell the location of the road was that it had fortunately worn itself deep into the sand so that the bushes left on either side indicated where it was. This was our salvation. For the travel over the road had packed the sand in such a way that it prevented it from becoming quicksand, as a large part of the surrounding country had become when thoroughly soaked with the rain. Had we left the road, we should probably have been engulfed in a quicksand and never have reached our journey's end.

While we had every sympathy for Dr. James, Fred and the other drivers, we ourselves, being dry and warm inside, were having a jolly time, but finally, when we reached Mr. Volz's trading store on the Hopi reservation, a few miles this side of Oraibi, we could not help laughing at their forlorn and bedraggled appearance. They were not only wet through, but they oozed water. If you put your hand on one of their shoulders, immediately a little stream flowed out from the knee below. The keeper of the store kindly turned over everything to us, and so we prepared our evening meal in the kitchen, while our wet friends changed their clothes and sent out their wet garments to be hung around and dried. What a funny picture it was; this little cramped up structure full of all kinds of grocery supplies to be sold to the Indians, mixed up with pottery, Indian dolls, Indian blankets, baskets, bows and arrows, and all sorts of things that had been secured from the Indians in trade, with wet coats, trousers and underwear hang-

ing near the stove, around which we four girls, directed by Professor and Mrs. Young, and assisted by the boys, were cooking supper.

CAUGHT IN QUICKSAND

But it would have taken a great deal more than a storm like this to have dampened our spirits and traveling ardor. There were still two hours of sunlight, and the storm seemed to have abated, so it was decided that we should go on. Knowing that from here to Oraibi there was no possibility of going over the ordinary road, as it was completely flooded, Dr. James sent out for a couple of Hopis to come and act as our guides, and at the same time look out for quicksands where we might be entrapped. After supper we resumed our journey, throwing back the canvas from our wagons so that we could have a fair outlook. It was interesting to watch the Hopi guides. Every now and again when they would come to some place down which the storm-water had poured in great fury, they would poke into the ground long sticks, which each of them carried for the purpose, in order to determine whether a real quicksand existed or it was only the surface that was affected by the water. At last we came to a place that looked like the bed of a dry ravine. The first wagon, which Dr. James was driving, halted on the edge while the Hopis probed to find out whether it was safe to attempt to cross. When the Indians called out, *"Lo-lo-mi"*—good—he started up the animals. We seemed to be going across all right, and the mules actually reached the

other side in safety, when all at once, just as if the surface were brittle piecrust, it gave way, and almost in a moment the two horses were down to their bellies and the wagon up to its bed.

"Out for your lives!" yelled Dr. James, and almost as quickly as I can tell the story, we had leaped out and the boys were throwing out the contents of the wagon on to the dry sand at the rear. While this was being done, Dr. James, flat on his back, was unhitching the harness of the "wheel" horses. He afterwards explained that he stretched out on his back in order to prevent himself being engulfed. He had already placed one of the boys at the head of the mules and had given instructions to the other driver, who brought a long heavy rope, and was making a loop of it on the rear axle. As soon as the horses were free from the wagon, a few sharp blows from the whip encouraged them to extricate themselves, especially as they were still fastened to the mules, which were urged forward at the same time and thus helped drag them out. Circling around so as to avoid the quicksand, the four animals were brought back to the rear end of the wagon and the rope from the axle tied to the stretchers. The four horses from the other wagon were then fastened ahead of our four animals. While this was being done, orders had been given for the boys to spread the rolls of bedding around the rapidly sinking wagon, so that they could be stood upon while help could be given to lift the wagon, when the horses were made to pull. When everything was ready, the two Mexicans, holding the lines and driving the two four-horse teams, Dr.

James hanging on to the pole so as to steer the wagon out, and all of us lifting wherever we could, the cry was given, "Out with it!" The drivers yelled like demons, their whips cracked angrily, the horses and mules pulled as if they were possessed and in ten sec-

THE HOPI PUEBLO OF ORAIBI, ARIZ.

onds the wagon was rolled back upon the solid sand.

Had there been any time wasted, it would have been impossible to get ourselves extricated. Nothing but promptitude and knowing what to do, and how to do it, could have accomplished our release in so short a time. And when the tension was over, we

congratulated ourselves, almost to tears, at our happy release.

Circling above and around the dangerous spot, we passed it in safety and had no further particular adventure until we reached the foot of the mesa upon which Oraibi stands. It had begun to rain again and sleeping out of doors was out of the question, so arrangements were made whereby we were enabled to occupy the only Indian vacant house there was. It was an adobe structure of one single room. And in that room our blankets were stretched out and, packed like sardines in a box, we went to sleep. We four girls were on one side, followed by Mrs. Young and the Professor, then the four boys and one of the Mexican drivers. Dr. James and the other driver had to be contented by stretching out at right angles at our feet.

UP TO ORAIBI

The next morning we were up bright and early and after getting all our belongings thoroughly dried we started for the village, which was perched high on the mesa top several hundred feet above the level of the surrounding desert. The last part of the trail we had to climb between rocks, where the pathway had been hewn out, somewhat after the style of the Acoma trail. As soon as we reached the top of this rock the village was spread out before us.

This is the largest as well as the most western of the Hopi villages or towns. It has a population of about one thousand. While in many respects the life is similar to that of the pueblo Indians at Acoma,

Laguna and Zuni, there are many points of difference, all of which it would be interesting to note. But we were here particularly to see the Snake Dance. This is the Hopis' prayer for rain. It is conducted in five of the seven villages, but in each village only every two years. It alternates each year with an-

Copyright by George Wharton James

ANTELOPE ALTAR, ORAIBI, ARIZ.

other most interesting ceremony called the Flute Dance, which is also a prayer that an abundance of water may come up from the interior of the earth into the springs and creeks.

The open air dance, which we were about to see, is, in reality, only a very small part of this elaborate

prayer for rain. For nine days and nights secret ceremonies transpired in the sacred kivas of the Antelope and Snake clans, to whom has been especially committed the charge of these particular prayers and ceremonies. No person, not even a Hopi, unless he be a member of one or the other of these clans, is permitted to see the sacred kiva ceremonies. The Hopis firmly believe that, if any person not authorized to participate in them even so much as stands on the top of the kiva and peeps down the ladder-way, one of two awful punishments will happen to him. He will either find a great horn, like a cornucopia, growing out of his forehead through which, little by little, the whole of his abdominal viscera, etc., will be withdrawn, or he will "swell up and bust." Dr. James, however, being a member of the Antelope clan, was given free access to both the Snake kiva and the Antelope kiva and as we stood near the top when he went down, we could distinctly hear the low humming song of the priests, gradually swelling to a crescendo and then diminishing until its sound scarcely reached our ears.

It was explained to us that these sacred ceremonies consisted largely in singing, prayers, and the dramatic representation in song of the history of their mythical ancestor-hero Tiyo, and the way in which he was instructed by "Those Above" in these rain-producing ceremonies. Part of the time, on four separate days, is occupied by the priests in going to the four quarters, north, south, east and west, hunting for the snakes or "Elder Brothers" as the Hopis firmly regard them.

At noon on the ninth day, which was the day of our arrival, the ceremony of Washing the Snakes takes place in the kiva. At this time all the snakes that have been gathered are solemnly dipped by the chief priests into a bowl of sacred water, while other priests

SNAKE DANCE, ORAIBI, ARIZ., SHOWING LINES OF ANTELOPE AND SNAKE PRIESTS

pray and sing. It is a thrilling ceremony and though fully described to us, it would occupy too much space to reproduce here.

THE HOPI SNAKE DANCE

Just before sunset, the open air public dance begins. To this everybody is welcome, and the result is that the housetops around the plaza are crowded with spectators. Hopis, Navahoes, Havasupais and other

Indians, together with white men and women who have gathered from all parts of the globe assemble early in the afternoon so that they may have a good point of vantage from which to watch the ceremonies. We were well located so that we were able to see practically everything that transpired, and as everything

Copyright by George Wharton James

ON A HOPI HOUSETOP, ARIZONA

had been thoroughly described to us, we were prepared to observe intelligently.

When all was ready the chief priest of the Antelope clan, followed by all the other priests, ascended from their *kiva* and then solemnly marched in single file to the dance plaza. Here a cottonwood bower had

been erected, the lower part of which was surrounded with a wide strip of canvas. This bower is called the *ki-si.* In this ki-si the snakes had already been placed that were to be used in the dance, and were in charge of the Warrior Priest.

As soon as the Antelope Priests reached the ki-si,

Copyright by George Wharton James

A GROUP OF SNAKE PRIESTS CARRYING DEADLY SNAKES, HOPI SNAKE DANCE, ARIZONA

they circled three times, and then lined up in a straight row with their backs to the ki-si, singing and shaking their rattles during the whole time. In a short time the Snake priests followed in single file from their *kiva,* circled in front of the ki-si as the

Antelope priests had done and then formed their line facing the Antelope priests, a distance of about three feet away. Then for fifteen or twenty minutes they sang and went through a number of fascinating, rhythmic movements that, for want of a better name, we call a dance.

Now, at a signal from the Chief Snake Priest, his line of priests broke up into groups of three, while the Antelope priests still remained in line. Solemnly advancing towards the ki-si the leader of the first group knelt and received from the Warrior Priest within, a writhing, wriggling snake. Carefully and deliberately placing this between his teeth, and holding it there, he arose, while the second man of his group placed his arm around his neck. Now, followed by the third member of the group, stroking each of them with his feather-whip, the group began the circuit of the dance plaza, while the second group advanced to the ki-si and in turn received a snake. As they secured their reptile and began to circle, the third group advanced and so on until all the groups were supplied with a snake. In the meantime the carrier of the snake of the first group, as soon as he had gone about two-thirds of the circuit, took the snake from his mouth and placed it upon the ground, resuming the dance and circling again to the ki-si, where he secured a fresh snake. It then became the duty of the third man of each group to pick up from the ground the snakes that had been placed down. Sometimes this act of picking them up was quite exciting, as the snakes would coil and threaten to strike. When they did this, the "gatherer" gently

stroked them with his snake-whip, the feathers of which tickled them and led them to try to escape. The moment they were uncoiled they were seized and placed in the left hand of the gatherer with as much unconcern and indifference as if they were pieces of inanimate rope.

In this fashion the dance continued until all the snakes had been used, after which they were thrown into a circle described on the ground by the chief priest with sacred meal. Here they were prayed over for a few minutes, sprinkled with more meal and sacred water and then at a given signal the Snake Priests made a wild grab into the writhing, rattling, wriggling mass, each one picking up as many snakes in each hand as he could seize, and after allowing himself a moment or two to straighten out the snakes in his hands, dashed down the steep trails, some in one direction and some in another, to certain designated spots in the desert beneath, where, reverently putting the snakes down and praying over them, they left them, with the expectation that they would convey to the "Snake Mother" in the Underworld, all the prayers that had been uttered by the Hopis during these ceremonies in their hearing. Then, hastily returning to their kivas each priest took a large drink of a liquid that looks much like cold tea. This was evidently for the purpose of producing vomiting, for, almost immediately after drinking, the priests knelt down in a row for that purpose. As soon as the vomiting was done, they were washed down with water brought for the purpose by the women and then retired to the secrecy of the kiva, there to feast upon

certain delicacies prepared for them by the women, thus terminating the ceremony.

Naturally I have described everything in the briefest and most inadequate terms, but those who

A HOPI MOTHER AND CHILD, ORAIBI, ARIZ.

wish to know more about this most wierd and thrilling ceremony can not do better than secure Dr. James's book, "The Indians of the Painted Desert Region," in which the whole ceremonial is thoroughly and accurately described.

A DESERT SAND STORM

On our return to Canyon Diablo we had another experience, thus fulfilling the promise that had been made that we should have specimens of all that the desert had to offer. We had driven about twenty miles, noticing, however, on the way, several wagons and buggies that had been mired in the quicksand that, at the time of the storm, had so nearly entrapped us. Suddenly, in the far-away west, there appeared a dark, cloudlike wave which seemed to be moving slowly in our direction. It was reasonably clear and calm all around us and none of us could understand what this wave-like appearance meant until we were told that it was a sand-storm approaching us with considerable rapidity. We hastened our teams along, hoping to reach a spring, where we intended to stay for our noon lunch, before the storm arrived. But our efforts were vain. When about a mile off, the gigantic wave of fluid sand, which by now reached from the earth to so high in the sky as completely to obliterate everything else, surrounded us with its discomforting fury. The animals positively refused to go any further, so that we were compelled to unharness them and wait the abating of the storm. In order somewhat to mitigate its fury, canvas was stretched from wagon to wagon, behind which we sheltered ourselves, but the force of the wind can be understood when I state that, while we were thus sheltered, one piece of the canvas was seized by the wind and ripped up the center as if it had been a sheet of tissue paper.

Here we stayed for about three hours, when, some of us growing hungry, we asked if we could not be provided with food. Laughingly our guide questioned if we knew what we were asking for. With

THE SAN FRANCISCO MOUNTAINS, NEAR FLAGSTAFF, ARIZ.

some indignation we replied that we thought we did. Immediately he went to the "grub-box," and taking therefrom a sack of buttered biscuits, gave one to each of us, together with an orange. We now understood the meaning of his question, for, as we tried to

eat, the sand got into our mouths so that it was practically impossible. The only thing we could do was to suck our oranges and patiently await the subsidence of the storm.

This occurred in due time and we were able to reach a satisfactory camping-place that night, and the following day caught the train at Canyon Diablo for Flagstaff.

FLAGSTAFF AND THE LOWELL OBSERVATORY

Flagstaff certainly has as picturesque a location as any of the Arizona towns or cities we saw on the trip. Situated on the foot-hills of the San Francisco Mountains, which tower over them to a height of over 11,000 feet, and surrounded by forests of juniper, pine and other mountain trees, it is rugged, picturesque and healthful.

The town has a large lumber-mill. It daily saws up many hundreds of thousands of feet of lumber which it sends east and west all over the country. Flagstaff used to be one of the points from which stages ran to the Grand Canyon, but owing to the building of the Grand Canyon Railway from Williams in the year 1900, the stage route is now seldom used.

Perched on a summit overlooking the town is the Lowell Observatory, so named after the well-known astronomer, Percival Lowell, of Boston, Mass., whose observations and writings on the planet Mars have excited interest not only among scientists but

throughout the lay world as well. We visited the observatory and were kindly received by the astronomer in charge and given every opportunity to see the methods by which the observations and photographs were taken.

CLIFF DWELLINGS, WALNUT CANYON

TO THE CLIFF AND CAVE DWELLINGS

Our chief object, however, in stopping off at Flagstaff was to drive out to the Cliff and Cave Dwellings. We went to these latter places first. We found them to be nothing but good sized holes, mainly found in the lava deposits on the tops of some of the smaller

volcanic peaks east and south of the main San Francisco range. There were quite a number of them and near the most remote of those visited we picked up a number of pieces of pottery and saw several broken *me-ta-tes* or grinding-stones which evidently had seen much service.

We then left for Walnut Canyon, to see the Cliff Dwellings, some ten or a dozen miles away, passing on the road a very deep hole, locally known as the Bottomless Pit, and then after driving a mile or two over a beautifully wooded plain, we came to Walnut Canyon. Here we camped, and, after taking lunch, proceeded to climb down its steep slopes to the narrow shelf on which the Cliff Dwellings were located. They were all of the same type. The under portion of the thick stratum of rock, being much softer than the upper portion, had eroded back to a depth of eight, ten and even twelve feet from the face of the cliff. These natural excavations seem to have been perfectly prepared for the Indians who wished to use them. Building up a wall in front and dividing walls at right angles, the excavations thus formed floor and ceiling and the dwelling was complete. We found a number of these dwellings in this canyon, and at Flagstaff, on our return, were shown many pieces of pottery, arrowheads, stone and flint hammers, axes, ears of corn, etc, which had been excavated from them.

While there are many local differences in the cliff ruins throughout the Southwest, they are mostly of this simple and primitive type.

ON TO WILLIAMS

TAKING the train again, it was a comparatively short ride to Williams, where we were to take train for the Grand Canyon. Here, also, we found the lumber industry quite active and thriving. A large mill is in constant operation, superintended by Mr. W. F. Dermont, who used to be a noted lumberman of Michigan, and who kindly extended to us the courtesy of the mill. We saw the logs rapidly skidded up by machinery to the saw, and there in a few swift backward and forward motions of the log-carriage and the sudden whirl of the saw, we witnessed the rapid slicing off of the bark slabs and then the cutting of the good timber into planks of whatever size they were best suited for.

We wished we could climb to the summit of Williams mountain, named after Bill Williams, one of Fremont's scouts, of whom we heard many interesting stories on our trip; but our time was too limited and the Grand Canyon was our chief object.

After one of Fred Harvey's excellent meals, served at the Fray Marcos Hotel, we boarded the Grand Canyon train, which runs sixty-three miles north, to the very edge of the great abyss.

When the varied objects were pointed out to us as we journeyed along, even this part of the road was interesting; but we were not much in the mood to look at lesser things when we were so near to the great canyon which we were told is "the most stupendous piece of natural scenery on earth." We Americans are so used to saying big things about

our own big country, that sometimes we were a little afraid this might be true about the Grand Canyon, but Dr. James, who has visited it regularly for over twenty years, assured us that it would surpass all our expectations and that we did not need to be alarmed. As we approached nearer to the canyon we could tell from the puffing of our engine that we were going up grade. For several miles this grade continued until the very "rim" of the canyon was reached—nobody calls it "edge" here; the only word used is "rim." We were soon at *El Tovar,* the hotel which is perched almost on the edge of the south rim. As soon as the train stopped we piled out as rapidly as possible and climbed up the steps that led to the hotel. We did not need to ask where the canyon was, for the moment we stood on the front porch the great, vast, majestic, sublime abyss was opened up before us.

Lots of people say that "where the Canyon begins, words end," but, all the same, I am going to try to put into words that which I saw; or else how can you have any idea of the impressions that I received?

An irregular stone wall about two feet high has been built on the very edge, and on this you can sit while you try to grasp some idea of the wonderful sight that is before us. From where we sat to the corresponding point on the opposite side is thirteen miles in an air line. Our elevation was 6,863 feet. The north wall is 8,300 feet. That is a part of the great Kaibab plateau, which is the highest portion of the whole canyon system. Somewhere between

the awful depths between these walls which are so far apart dashes the surging Colorado River on its way from the mountains to the sea.

Can you imagine the banks of a river so far apart? And we have to take the river on faith, for we cannot even see it. Sometimes, when it is especially noisy and everything on the rim is quiet, one can hear its sullen roar. But we have to go to other outlook points before we can get any sight of it at all.

The first thing that arrested our attention was that the main color of the walls is red. The walls do not go sheer up and down, as some of us had thought. They are broken up, as it were, in all kinds of confused ways, and yet we could see that if the two sides of the canyon were pushed together, and made to conform in elevation, the bands of limestone and sandstone on the north rim would fit similar bands on the south rim.

As I sat on the banks of the canyon all alone one morning with Dr. James's book, "The Grand Canyon of Arizona," in my hand, this is what I wrote:

"About the best way I can describe the canyon is to ask you to imagine yourself standing on the top of the highest peak of a long mountain range. Everybody knows, generally speaking, how a mountain range looks. Now try to suppose that the topmost part of this range has a hinge, and that you are able suddenly to lift up each side of the mountain slope until the hinged summit ridge has become the deep trench of a rude 'V' shaped gorge, and then that this whole mass of the inverted range is thrust deep down into the earth at your feet. This is a rude sug-

gestion of what the canyon is; but the eye now begins to take in the fact that this deep inverted mountain range is composed of rude steps, as it were, three hundred, five hundred, a thousand feet high, and of slightly differing colors, but where red predominates, and that they are cut into all kinds of conceivable and inconceivable shapes, gigantic in size, fantastic in form, and truly unlike anything we have ever seen before."

It was late in the afternoon and the sun was close upon setting, so that great purple shadows were cast, and these enabled our guide to point out some of the tremendous and fantastic forms and nature sculpturings that he said he would show to us so much more clearly when we rode down the trail to the river. He had already promised that we were to stay here a full week, possibly more; for he says that this is the only way to get a fairly reasonable idea of the marvels and wonders of this stupendous gorge.

Before us, slightly to the right, we saw a break in the North wall. This is Bright Angel Canyon, and down it flows a beautiful clear stream called Bright Angel Creek. To the right of this we could clearly see three massive towers. The nearest is an angular mass of solid rocks which slopes backward in a singular fashion. This is called Zoroaster Temple and is 7,136 feet in elevation. Close behind it is a more beautiful and stately structure, Brahma Temple, which is 7,554 feet high. Behind Brahma is another great mass, which at first we were not able to see clearly, although we were assured that it

is separated from the north wall by a distance of several miles. To us it looked as if it were a part of that wall. It is Deva Temple, 7,354 feet high.

To the left of Bright Angel Gorge, almost opposite Brahma, is Buddha Temple, 7,218 feet in height, while below it is Buddha Cloister. Behind is Manu Temple, 7,192 feet. To the left of Buddha is a quaint and peculiarly shaped temple named Cheops Pyramid, 5,350 feet high. Just above and farther to the left is a peculiar yet beautiful temple, with two great cloisters in front of it, and it is named Isis Temple. Its elevation is 7,028 feet. Beyond it is the grandest and most stupendous of all the buttes of this part of the canyon. This is 7,650 feet high. Its mass alone is as great as Mount Washington, the chief peak of the White Mountains in New Hampshire and the highest mountain of all the United States east of the Rocky Mountains. Yet here Shiva's Temple was but a comparatively small and insignificant portion of the rocky scenery that was spread out before us. It is a singular and never-to-be-forgotten fact that the tops of these mountain masses are at about the same elevation as the ground on which we stand, and their bases are "way down" in the heart of the canyon in that deep "somewhere," the bottom of which we had yet to see. Some of the walls of Shiva's Temple are as absolutely precipitous as the Bunker Hill monument and three or four times as high.

To the west of Isis are Horus and Osiris temples. The former is 6,150 and the latter 6,637 feet. In front of Horus is a tower, or symmetrical struc-

ture, 5,997 feet high, which is called Rah Pyramid. Although it is over a mile high, it looks very insignificant in this scenery.

We were told that this canyon is 217 miles long. But that is only the length of the river in this part of the canyon. As we looked at the great walls opposite us, winding in and out of deep recesses and curving around vast amphitheaters, it seemed to be no exaggeration to imagine that if they were "ironed out" into a straight line they would be pretty nearly long enough to completely encircle the earth.

Having taken in all these vast rocky features which were before us, our eyes naturally dropped to what appeared to be the lowest part of the canyon nearest to us. This is a great plateau called Angel Plateau. Its elevation is 3,876 feet. So we were looking down a sheer three thousand feet less ten. In what seemed to be about the center of this plateau was a beautiful green patch which we were told is called Indian Garden. Here, years ago, the Havasupai Indians used to cultivate a little ground wherein they grew their melons, squash, onions, beans and chili. Now the white people use it as a garden for growing watermelons, cantaloupes and the smaller vegetables which form tasty additions to the lunches that those who ride down the canyon generally bring with them from the hotel.

While we were looking at all these things the sun was sinking nearer and nearer to the horizon. The deeper it got, the more intense and black became the shadows in the canyon, and, strange to say, the more clearly we were able to pick out the towers and

temples that at first sight looked so indistinct and hazy. And, oh, the brilliant colorings of the heavens and the earth! They seemed to combine to make one gorgeous mass of splendid and variegated color such

EL TOVAR HOTEL, GRAND CANYON

as we had never seen before. All of our attention was then arrested by the sunset. Darts of brilliant red, fiery opal, gleams of scintillating brightness, threatening arms of inky blackness, reds, pinks, oranges, golds, chocolates, greens and grays, commingled, broke away, changed, united, dispersed and formed new combinations, yet each new one was grander, more gorgeous and sublime than the one

that preceded it. Well may people rhapsodize over the gorgeousness of the Grand Canyon sunsets.

EL TOVAR HOTEL

As soon as the sun had gone down we turned our attention to the hotel. What a large and interesting structure it is! It is different from any hotel we ever saw before. Built about in the center of the curve of a rude amphitheater, its location is somewhat lower than the giant arms of the amphitheater. It is close to the rim and is built in such harmonious fashion that it does not seem out of place in its rugged setting, as a hotel built on the conventional lines certainly would do. The proper way to see it is to walk about half a mile, and then it appears like a large three-storied bungalow, built, the first story of solid logs brought from far-away Oregon, and the upper stories of heavy planking and shingles, all stained to a weather-beaten brown that harmonizes with the gray-green of the trees which form its immediate background.

In architecture it reminds one somewhat of the pictures seen of Swiss chalets, and also of Norwegian mansions. We wondered whether it was a "dressy" hotel and whether all the lady and gentleman visitors felt that they had to "dress for dinner." We soon found out, however, that there were no such conventional restrictions. While everybody dressed nicely, nobody seemed to care how anybody else dressed, and there was perfect freedom and good-fellowship without the restrictions of a conventional city hotel.

There was a picture-room and news-stand where most beautiful photographs, sketches and paintings of the canyon and the Indians could be purchased, and a large hall decorated with interesting and striking heads of elk, mountain-sheep, mountain-lions, deer and antelope. The floors were covered with beautiful Navaho blankets.

It was soon dinner-time and we were shown to our rooms. They were just as comfortable and cozy as they could be, and yet by cozy I do not mean small, for they were large and airy. We had a fine bath-room attached to our bedroom, and in five minutes were enjoying a good hot bath. We dressed quickly, in order not to be late at dinner, and then all of us sat together at a table provided for us in the dining-room.

Professor Young occupied the head of the table and Dr. James was at the foot. And what a good dinner they gave us! But that was nothing new, as El Tovar is one of the Fred Harvey hotels, and all the way along from Chicago we had been learning why they have gained such a great reputation. Every meal seemed to be better than the one preceding it.

The dining-room is quadrangular in form, ninety feet long by forty feet wide, and arched overhead. The roof is supported by six huge log trusses. Everything is finished in rough wood dyed as brown as the coffee-berry. Two massive fireplaces built of gray sandstone stand one at each end. It is lighted by electric light, and through the triple windows we looked out to see the brilliant Arizona stars. How clear the sky was!

Though we had a good dinner, we did not linger over it too long, as we were all wishing to get another glimpse of the canyon before going to bed, and Dr. James told us that tomorrow we were going out to Grand View Point and beyond.

ANGEL PLATEAU, BELOW EL TOVAR HOTEL, GRAND CANYON OF ARIZONA

OUT TO GRAND VIEW POINT AND BEYOND

El Tovar is provided with a magnificently equipped stable, with saddle-horses, mules, pack-burros, carriages, buggies, tallyhoes, etc., and it was planned for us that in the morning we should ride in a tallyho sixteen miles to the east, to the magnificent outlook known as Grand View Point, and then still farther

east on saddle-horses that were to be taken on ahead to be ready for us on our arrival.

We were a happy and buoyant lot as we climbed into the tallyho, and there was a good-natured fight as to who should ride with the driver. I was one of the fortunate ones. The drive was through scrubby-looking juniper and pinion trees, and a little distance out we turned towards the canyon rim to get the view from Yavapai Point. This point is only three miles from the hotel, yet it is amazing how different the canyon looks than when seen from the hotel. Here we caught two distinct glimpses of the river. To the far-away east we could see where the Little Colorado enters into the main Colorado River; and in the heart of the canyon were two majestic buttes, one with a flat top, called Wotan's Throne, with an elevation of 7,700 feet, and the other, Vishnu Temple, wonderfully carved by centuries of erosion, 7,537 feet high. Just in front of Wotan's Throne is Angel Gate. It received this name as follows: Long ago there was a great and wise Indian chief, whose wife died. He mourned for her and would not be comforted until Ta-vwoats, one of the Indian gods, came and told him that she had gone to a happier and more beautiful land. He offered to take the chief there if he would pledge himself to mourn no more on his return. He received the promise and brought the chief down a rough, wild and rocky trail which he had made between the mountains, and took him to the fair land of Southern California, where the wife was found dwelling happily with other disembodied spirits. After their return the god turned

the great river into the trail he had made, in order to prevent the Indians from visiting the favored land without his permission. But he promised that at some future time he would come again and lead the Indians into this beautiful land. So now every year at a certain time the medicine men of different tribes meet at a certain place on the north rim of the canyon and there watch for the coming of the god. As he is to appear through this gateway, it was deemed appropriate to give it the name of Angel Gate.

While we were listening to this story we were driven along until, shortly before reaching Grand View Hotel, we came to an amphitheater where stand two remarkable pillars of erosion, Pompey's Pillar and Thor's Hammer. The hotel is a log structure and has a frame annex, and the view from either building is a remarkable one; but we drove right out to Grand View Point. Here it seems as if the canyon were widened out and also scooped out, so that we got a clearer and fuller view not only of the river, but of a vast assemblage of gigantic towers, temples, buttes, walls, obelisks, cloisters and abutments. We stayed here for a couple of hours enjoying the expansive view to the full.

After a picnic lunch we all took to the saddle, and, though none of us were expert riders, we were soon galloping through one of the beautiful parks that line the canyon as we proceeded farther east. Three miles from Grand View we reached the cabin of John Hance, one of the old Grand Canyon guides, and a remarkable story-teller whose funny and fantastic stories have been repeated until he has gained

national fame. Near by is a trail known by his name, and down it Dr. James says he made his first visit to the Grand Canyon, over twenty years ago. Here we saw the wonderful Three Castles and Ayer Peak, with other stupendous monuments, and then rode on to the head of Red Canyon trail. But we

AYER PEAK, NEAR OLD HANCE TRAIL, GRAND CANYON OF ARIZONA

were bound for a still further ride and pushed on east until we came to Moran Point, so named because it was here that Thomas Moran, the great artist, painted one of his marvelous pictures of the Grand Canyon. Two miles beyond Moran Point is Zuni Point, and still farther Navaho Point, Desert View, Comanche Point, and Cape Solitude.

By this time a number of us were very tired with our ride, and we wondered how we were going to get back. But we were delighted to learn that this was to be another camping-out trip, and that we were to sleep out. Our blankets had been sent for the purpose on pack-burros. Already a negro cook was busy getting our supper ready by a camp-fire, while some little distance off a bonfire had been built for us and our blankets were being stretched out on the ground in accordance with the instructions of Professor and Mrs. Young. What a delightful surprise! Nobody had said a word to us about it, yet there we were in this solitary spot and going to sleep out again in the open air, with the promise of two or three nights' camping in the canyon. After a hearty supper we took another look at the canyon by sunset, and then sat around the camp-fire while Dr. James told us Indian legends of the canyon and then induced the young men who had come to take care of our horses to tell us some of their experiences. What a wild, exciting life that of an Arizona cowboy must be! These experiences which were so remarkable to us were a part of their everyday life, and they laughed at the notions we expressed. When the time came we were all ordered off to bed, and Mrs. Young laughingly told us to "close the door and keep out the drafts."

As soon as I was comfortably ensconced in my blanket, my eyes instinctively sought the stars. They seemed larger, nearer, clearer and more beautiful than I had ever seen them before, and now and again a falling star made a brilliant flash of light through

the dark as almost to startle me. How calm and serene the stars were! I think I can now see why Dr. James loves so much to live out in this wild country, sleeping in the open all the time.

During the night we were awakened by what seemed to be the barks, yelps, howls, cries and wails of a thousand or more coyotes, but we were solemnly assured that all that noise and racket was made by not more than three or four of those cowardly animals.

Before sunrise we were all awakened, and, though the air was crisp, we hurried to the Point in order to get all the effect of the sunrise, which we expected would be unusually beautiful on account of the banks of clouds that appeared in the heavens.

One would have to have the power of a John Ruskin or a Joaquin Miller to describe that wonderful sunrise. When the morning did fully break and the whole canyon was flooded with light, we thought how perfectly truthful a description were the words of Browning as quoted to us:

"Day boils at last:
Boils, pure gold, o'er the cloud-cup's brim
Where spurting and suppressed it lay,
For not a froth-flake touched the rim
Of yonder gap in the solid gray
Of the eastern cloud, an hour away;
But forth one wavelet, then another, curled,
Till the whole sunrise, not to be suppressed,
Rose, reddened, and its seething breast
Flickered in bounds, grew gold, then overflowed
the world."

After breakfast we took another general survey of the canyon at this point. The scene is no more like that presented at El Tovar than Broadway, New York, is like Market Street, San Francisco. Of course it was all rocky scenery, but so entirely dif-

COLORADO RIVER, NEAR FOOT OF BASS TRAIL, GRAND CANYON OF ARIZONA

ferent! Here, for miles, we could see the winding course of the Colorado River as it dashed between the walls of Marble Canyon. To our right were the beautifully colored Echo Cliffs, while stretching off towards the far-away horizon was the Painted Desert. Close by we could see where the Little Colorado joins the main Canyon coming in from the

south; while to the left were Vishnu Temple, Wotan's Throne, Solomon's Temple, and a score of other buttes carved and sculptured by Nature in the heart of the canyon. Surely no band of school children that ever lived were privileged to gaze upon a more wonderful scene than were we!

DOWN THE RED CANYON TRAIL

It was nearly noon before we left, so each of us was given a "hand lunch" to eat as we liked. To our delight, we then found that we were to be taken down the Red Canyon trail, there to camp at night close by the side of the rapids of the raging, swirling, turbulent, dashing, muddy Colorado.

It took us all the afternoon to ride back and descend the Red Canyon trail. My! my! I little thought that animals could be found that were strong and sure-footed enough to take people down such trails as that. Dr. James told us that, as a rule, tourists are brought out by this trail rather than taken down it, as it is easier to ride up a steep trail than to ride down.

How the trail winds and twists around in places! Ahead of us went the pack-mules and burros, one or two of them having bells round their necks which clanged and jangled at every step. We can now understand how careful the "boys" must be in fixing the packs upon the backs of these animals, for if they were carelessly adjusted, the heavy loads would pitch the poor creatures forward when they descend some of the steep places that occur on the trail.

Several times we got off and walked, and three or four times when we came to places where we could all stop, Dr. James gave us a most interesting talk about the peculiar rock formations that were shown on either side. He informed us that the lowest series of strata found in Red Canyon are known as the Algonkian, and that they are supposed to be the oldest stratified rocks in the world. He showed us how the geologists tell that, although there are now only fragments left of these strata, about five hundred feet in height, they clearly indicate that at one time they were twelve thousand feet thick at this point. When we asked where the other eleven thousand five hundred feet had gone, he said that they were washed away in prehistoric times, and that possibly their destruction helped to supply the sand for the great Mohave and Colorado deserts in Southern California. He then went on to tell us that geologists claim that in the neighborhood of twenty-six thousand five hundred feet of strata, in addition to the five thousand feet that still remain at the Canyon, were deposited in the early centuries of the world's history and have since been entirely swept away. It scarcely seems possible, but the scientists who have studied the canyon affirm that it is so .

No wonder that after we had had our camp-out supper and were once more stretched out in our blankets under the brilliant stars, with the sullen roar of the Colorado River in our ears, the marvel and awe of it all kept us wide awake that night!

In the morning we were treated to another pleasant surprise. Though telling us nothing about it,

Mrs. Young had secured bathing suits from the hotel, and with Professor Young, Dr. James and three of the "cowboys" who had promised to go swimming with us and protect us from personal danger, we were to enjoy the unique and strange experience of a swim in the Colorado River in the heart of the Grand Canyon. There was a wild, raging, dashing, splashing rapid a little below where we were to go in, but the river makes a kind of sheltering curve at this point, so that we were shown that if we kept within certain limits we could swim to our heart's content and in perfect safety. How delicious the water was, and how soothing to our bodies, somewhat wearied as they were with the unusual exercise of horseback riding. We enjoyed thoroughly our swim and paddle in the water, and it gave us such an appetite for breakfast that we were almost ashamed when, after having received such an abundant first helping of everything, we had to ask for more. After breakfast we watched with a great deal of interest the packing up of the cooking utensils, our bedding, and the few provisions that remained.

After a pack-saddle is put on, the smaller and heavier articles that are to be packed are placed in two boxes made of light wood and rawhide with the hair still left on. These boxes are called *kyaxes*. They are suspended to the pack-saddle by means of a rope securely fastened at each end, one on each side of the animal. The bulkier articles, such as camp-kettles, coffeepots, etc., are then put partially in the kyaxes and partly resting on the pack-saddle, and above these is piled the bedding and light stuff, the

whole pack being covered with a stout canvas. Now comes the process of tying it on, and this is done in a peculiar and interesting manner known to Westerners as "throwing the diamond hitch," which is regarded as the final test of a man's full abandonment of the title "tenderfoot." No tenderfoot can throw a diamond hitch, and as soon as he learns to do that he is called a tenderfoot no longer.

Packs all on, the signal to start was given, and another surprise and delight was given to us. We were told that we were not to go back the way we came, but were to have the unusual experience of a ride through the canyon, over by the old Hance trail and out by the Grand View trail.

The ride took us all day, for we took our time and enjoyed everything as we journeyed along. In Hance Canyon we were shown the Temple of Set, named by Thomas Moran, and heard some interesting experiences of early days from Dr. James.

Then slowly we began the upward climb, and finally reached the Horseshoe Mesa, about half way up the Grand View trail, in time for supper. We sat at the same table with the miners who were taking silver and copper ore out of the mine a little distance away. After supper, the superintendent took us through the mine and we saw where tons of ore had been removed, every ounce of which had been packed up to the rim on the back of burros, and then hauled by wagon to the railroad, twenty or more miles away, for shipment to the smelters.

When we returned we found our blankets were already spread out not far from the miners' cabins;

but before we went to rest we had another interesting experience. Each of us was provided with a candle and we followed our leader over the plateau or mesa to its very edge, and then down a somewhat ticklish trail to a narrow terrace, where we descended into the mouth of a large cave. After lighting our candles and looking with wonder upon the different formations that were presented in the large and natural entrance hall, we began to crawl through openings which led us into tremendous halls, corridors and chambers, in all of which are stalagmites, stalactites, peculiar rock-ribbon formations, etc., speaking of the silent action of the centuries; while water charged with lime has slowly trickled down, making these interesting deposits.

Tired out, but charmed and delighted with the experiences of the day, and bewildered by the many new and wonderful things that we had seen, we turned to our out-of-door bed-chamber and were soon sleeping the sleep of the young, happy and healthfully tired.

BACK TO EL TOVAR

While we were up early next morning, we were in no hurry to get away. We went down to the mine and watched the packing of the ore on twenty little burros that stood winking and flapping their ears while their loads were adjusted. Each animal was required to carry from one hundred and fifty to two hundred pounds. It scarcely seemed possible, yet so strong are their sturdy little legs that when the packs were all finally adjusted and the leader of the burros

started his bell jangling merrily, they all got into line and marched off as steadily and sedately as if they were in a royal procession where regal dignity was expected. Another string of pack-burros was sent to the spring down in the canyon to bring up the drinking water required at the camp. We now began to realize how very useful and indispensable is the burro in our western country. Without him, travelling and mining in such places as the Grand Canyon would practically be impossible. How interesting it is to watch the little peculiarities that individualize these burden-carrying creatures that at first appear to be almost all alike! Our guide told us many interesting stories about them which, if put into book form, would make as interesting a book as young people could ever wish to read.

It was a jolly ride back to El Tovar, where we all regretted to take leave of our ponies. By now we began to feel quite at home in the saddle. After a good night's rest we packed up, took a last good look at the Canyon, hastily visited Mallery Grotto—a little cave covered with Indian pictographs, about half a mile from the hotel—and then sorrowfully said farewell to the canyon. It seemed a pity that we had to leave this most majestic of all the natural sights we had so far seen, but necessity compelled. Our journey was rapidly coming to a close. We were to visit the two cities of Prescott and Phoenix, and then drive up to see the great Roosevelt dam, by means of which the waters of the Salt River are being impounded so that they can be used for irri-

gating the lands of the valley. This would bring our remarkable journey to an end.

Returning to Williams, we took the main line again. It was but an hour's ride to Ash Fork, where we changed cars for the branch road to Phoenix. The chief place of interest in Ash Fork is the Escalante Hotel, one of the Fred Harvey hotels, which derives its name from one of the Franciscan explorers who entered the region of Arizona and Utah about

STREET SCENE PRESCOTT, ARIZ.

the time that Thomas Jefferson was writing the Declaration of Independence. The road to Prescott took us over an interesting and historic part of Arizona, full of stories of mines, hairbreadth escapes from bloodthirsty Apaches, and wonderful experiences of cowboys and miners. We passed Jerome Junction, from which one of the most winding and twisting railways in the world runs up to Senator Clark's great copper mining-camp of Jerome, a

camp the original claim of which was sold for three hundred dollars. It afterwards developed into a mountain of copper from which Senator Clark has taken millions of dollars' worth of ore.

GENERAL VIEW OF PHOENIX, SALT RIVER VALLEY

PHOENIX AND THE SALT RIVER VALLEY

Practically the end of this road is at Phoenix, the capital of Arizona and the chief city of the Salt River valley. Its population is between eighteen and twenty thousand. It is a modern city in every sense of the word, and yet we were surprised every now and again to meet with little groups of Pima and

Maricopa Indians who had come to the city from their reservation, twenty miles away, either to sell their baskets and pottery or to purchase supplies. There is a beautiful Y. M. C. A. building, and some of the bank and store buildings are large and pre-

ARIZONA SCHOOL OF MUSIC, PHOENIX, ARIZ.

tentious. On the outskirts of the city is the territorial building, a striking structure, and the citizens were just rejoicing in their newly acquired statehood.

But our chief interest in Phoenix lay in the fact that it was in the heart of the Salt River valley, where is located one of the great irrigation projects of the United States Reclamation Service, which started out a few years ago to redeem the valley from its barren, desolate condition to one of the most fertile valleys of the world.

Automobiles were provided for us by the courtesy of Messrs. Dwight B. Heard (whose wife is the daughter of one of Chicago's noted citizens, A. C.

Bartlett) and Louis C. Hill, the supervising engineer. Rapidly we were whirled around Phoenix to Glendale, where we saw the great Arizona ostrich farm, where hundreds of these tropical birds thrive luxuriously and are a source of great attraction to

TERRITORIAL CAPITAL BUILDING, PHOENIX, ARIZ.

tourists, and where one of the large beet-sugar factories of Arizona is located. We were then taken to Tempe, where the Government's experimental date farm was established several years ago, which has already demonstrated that dates can grow as well in Arizona as they do on the oases in the desert of Sahara. We tasted a number of varieties, all of

which were richer and sweeter than the imported dates and were certainly much more agreeable to look at in their fresh condition than those which we buy that have been tightly packed in boxes.

We passed through miles and miles of orange, grape-fruit, lemon, peach, apricot, fig and other orchards, and through thousands of acres devoted

A BLACKBERRY PATCH IN THE SALT RIVER VALLEY

to berries and alfalfa. The fruit of these orchards was as charming to the eye as it was delicious to the taste, the oranges and grape-fruit being especially of very fine quality and ripening earlier than those that grow in California. Frost is unknown, and there are no pests, so that the oranges always look clean and beautiful. Many thousand head of cattle are annually brought into this valley for the purpose of being fattened for the Arizona and California mar-

kets, the rich alfalfa affording the best kind of fodder for them.

At Mesa we were hospitably entertained by Dr. A. J. Chandler in a beautiful mission structure called Chandler Court. Dr. Chandler is a pioneer

ORANGE GROVE IN SALT RIVER VALLEY, NEAR PHOENIX, ARIZ.

in this region and was one of the first to discover the fact that an immense amount of artesian water was to be had for the boring in this land that had hitherto been regarded as an almost irreclaimable desert. He put in several wells, and before the

Government had begun its reclamation work he had several thousands of acres of alfalfa land bearing eight or more crops a year.

FROM MESA TO ROOSEVELT DAM

When the Government decided to undertake the damming of the Salt River and Tonto Creek, a place

CANAL NEAR PHOENIX, ARIZ. SALT RIVER IRRIGATION PROJECT

was found, just below where the two unite, where, through a rugged mountain pass, the waters flowed down to waste themselves upon the sands of the desert. To reach this place it was essential that a road should be constructed over which all the neces-

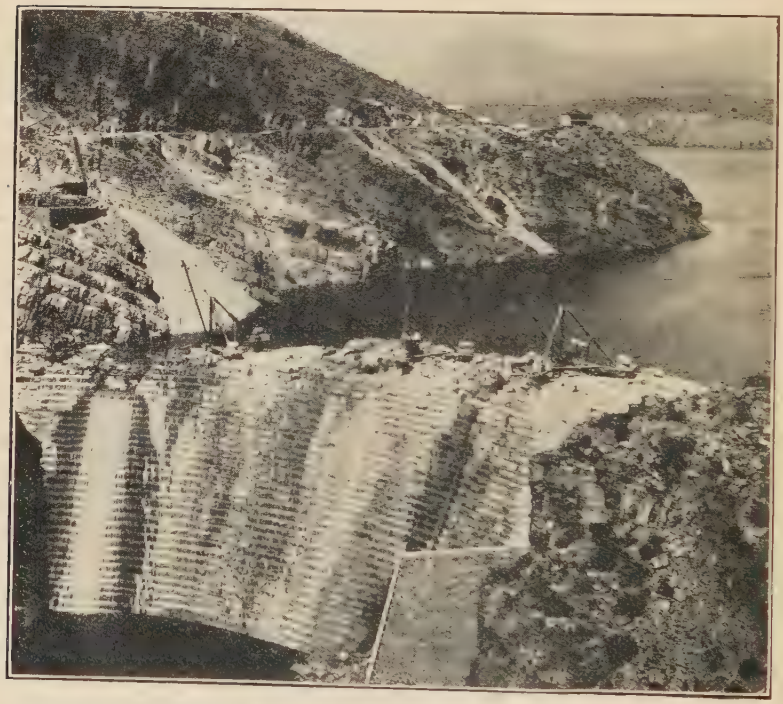
sary machinery and supplies could be hauled. The nearest shipping point was Mesa, and the dam site was sixty miles away. As we went over this road, a large amount of the labor on which was performed by Apache Indians, we well understood the problem it presented to the engineers. Over rugged mountain heights and down into canyon depths it wound its way, giving us new scenic delights at every turn, so that we were almost sorry when we arrived at the dam.

This massive structure is of solid masonry, 235 feet long at the river-bed, 680 feet on top; thickness at the bottom, measured up and down stream, 168 feet; and 284 feet above the lowest foundations. The solid contents of the dam is 329,400 cubic yards. It is an arched dam with the arch upstream and a height of 220 feet actually covered by the water. The watershed supplying the water is about 6,260 square miles in extent. This dam creates one of the largest artificial lakes in the world, being about four miles wide by twenty-five miles long. Its capacity is ten times greater than the great Croton Reservoir, which supplies New York City with water. It contains far more water than is stored in the much vaunted Assouan Dam of the British on the Upper Nile. In fact, there is water enough stored there to cover the whole state of Delaware with water over a foot deep, or to fill a canal three hundred feet wide and nineteen feet deep, extending from Chicago to San Francisco.

Returning to Mesa, the special part of our trip ended. We went on to Maricopa Junction, took the Southern Pacific Sunset Route train to El Paso, and

thence to Chicago, where the most wonderful trip ever enjoyed by school children was brought to a close.

In talking with our fellow student travelers since our return, we feel that we have all learned, in the most forceful manner possible, several important



THE ROOSEVELT DAM, NEARING COMPLETION, ARIZONA

lessons. These are: 1. That our country is immensely greater and more wonderful than we had hitherto dreamed. 2. That there are other civilizations than that of the so-called Anglo-Saxon, existing in this our country, side by side, and, therefore, that no one form

of civilization is necessary for mankind. 3. That while we may teach the Mexicans and Indians many things, they likewise may teach us many things that we can learn to our profit. 4. As we looked on the Roosevelt Dam and surveyed the land its waters were to reclaim, and thought of the happiness it would produce to so large a number of our citizens and their families, we were compelled to realize the superiority of the works of peace over those of war. 5. We have learned that the vastnesses of Nature have aroused, awakened, brought into being, as it were, corresponding largenesses in our own souls, so that our lives henceforth can never be as small as they might have been had this wonderful and revealing trip not been provided for us.

INDEX

	Page
Acoma, N. Mex., History of	100
Acoma Trail, The	97
Adama and the Petrified Forest	202
Agua Fria Crater	164
Albuquerque, N. Mex., The City of	62
Angel Plateau, The	243
Believers in Witchcraft	196
Buffalo Plains, The	40
Chorus, The Indian	122
Cliff and Cave Dwellings, Flagstaff, Ariz	236
Cliff Dwellings, Puyé, N. Mex	57
Coming of St. James to Spain, The	110
Crater, Agua Fria	164
Distribution of the Gifts, The	123
Don Manuel, The Story of	131
El Moro Inscription Rock	171
El Tovar Hotel, Grand Canyon	245
Enchanted Mesa, The	88
Fiesta of San Esteban, The	113
Fisher's Peak, Trinidad, Colo	8
Flagstaff, Ariz	235
Gallup, N. Mex	201
Glorieta Mountains	41
Grand Canyon, Ariz	238
Grand View Point	247
Holbrook and Winslow	211
Hopis and Their Snake Dance	214
Indian Chorus, The	122
Indian Cooking	79
Indian Village of Zuni, The	178
Inscription Rock	170
Isleta, Pueblo of	68
Katzimo or the Enchanted Mesa	88
Katzimo, The Story of	90
Laguna, Pueblo of	73
Las Vegas, N. Mex	36
Las Vegas Hot Springs	39
Lava, Rivers of	162
Lowell Observatory	235
Maxwell Land Grant, The	33
Maxwell, Lucien B., Experiences of	34
Mesa to Roosevelt Dam, From	266
Meteorite Mountain, The	212
Mountain Drive, A	46
Mount San Mateo	137
Navaho Blankets, Weaving of	149
Navaho Indians, The	147
New Mexico, University of	66
Oraibi, Ariz	224
Origin of the Navahoes, The	151
Penitentes	21
Petrified Bridge, Ariz., The	205
Petrified Forest, Ariz., The	204
Phoenix and the Salt River Valley	261
Pueblo Ruins	55
Quicksand, Caught in	221
Rabbit-Hunt, A	69
Raton, N. Mex	20
Raton Pass, N. Mex	18
Red Canyon Trail, The	254
Roosevelt Dam, The	266
Saint James to Spain, The Coming of	110
Salt River Valley	261
San Esteban, The Fiesta of	113
San Mateo, N. Mex	135
San Rafael, N. Mex	161
Sand Storm, A Desert	233
Santa Fe, N. Mex	49
Santa Fe Trail, The Old	29
Scenic Highway, The	43
Simpson's Rest, Trinidad, Colo	10
Story of a "Civilized" Indian	118
Summit of Mount San Mateo, The	141
Uncle Dick Wooton	13
U. S. Indian School, Albuquerque, N. Mex	67
Water-Rock, N. Mex., A Historic	128
Wewa, a Zuni Indian	198
Wheat-Threshing by Laguna Indians	76
Williams, Ariz	238
Winslow, Holbrook and	211
Witchcraft, Believers in	196
Wooton, Uncle Dick	13
Zuni, N. Mex., The Indian Village of	176
Zuni Fetiches	61, 183
Zuni Philosophy	183

Books by George Wharton James

HEROES OF CALIFORNIA. 515 pages, with eighty illustrations. $2.00 net; postpaid, $2.16.

THE GRAND CANYON OF ARIZONA; HOW TO SEE IT. An entirely new and complete guide book. 265 pages, with maps and 48 pages of pictures. $1.50 net; postpaid, $1.63.

IN AND AROUND THE GRAND CANYON OF THE COLORADO RIVER IN ARIZONA. Mr. James' original and instructive work on the Grand Canyon. 346 pages, with 23 full-page plates and 77 illustrations in the text. Crown 8vo. $2.50 net; postpaid, $2.70.

THE INDIANS OF THE PAINTED DESERT REGION. 268 pages, with 16 full-page pictures and 50 half-page illustrations from photographs. Crown 8vo. $2.00 net; postpaid, $2.18.

IN AND OUT OF THE OLD MISSIONS OF CALIFORNIA. An Historical and Pictorial Account of the Franciscan Missions. The best book on the subject. 392 pages, with 142 illustrations from photographs showing the architecture, the interior decorations, furniture, pulpits, crosses and candlesticks of the Missions, pictures of the Saints, etc. 8vo. $3.00 net; postpaid, $3.20.

THE WONDERS OF THE COLORADO DESERT (Southern California). Its River and its Mountains, its Canyons and its Springs, its Life and its History pictured and described. The standard work on the Colorado Desert region. With a colored frontispiece, 32 full-page plates, and more than 300 pen and ink sketches by Carl Eytel. 8vo. $5.00 net; express paid, $5.45.

THROUGH RAMONA'S COUNTRY. 406 pages. Fully illustrated from photographs. Crown 8vo. $2.00 net; postpaid, $2.20.

THE STORY OF SCRAGGLES. An Autobiography of a Song Sparrow. Illustrated. 12mo. Cloth, $1.00 net; postpaid, $1.07.

INDIAN BASKETRY. Third Edition, including "How to make Indian and Other Baskets." 412 pages. With 600 illustrations. 8vo. Cloth, $2.50 net; postpaid, $2.75.

HOW TO MAKE INDIAN AND OTHER BASKETS. 140 pages. With 225 illustrations. $1.00 net; postpaid, $1.15.

TRAVELER'S HANDBOOK TO SOUTHERN CALIFORNIA. Baedeker size for pocket. 507 pages, with illustrations. 16mo. Cloth, $1.00; postpaid, $1.10.

WHAT THE WHITE RACE MAY LEARN FROM THE INDIAN. 269 pages. 84 illustrations. 8vo. Cloth, gilt top, $1.50; postpaid, $1.75.

CALIFORNIA BIRTHDAY BOOK. Selections from the writings of Living California Authors, with biographical sketch of each and lists of books. 430 pages. 16mo. Cloth, $1.00; postpaid, $1.10.

AN APPRECIATION OF CHARLES WARREN STODDARD. With four selections. $1.00.

For Sale by

A. FLANAGAN COMPANY

CHICAGO, ILL.

Summer Excursions

Colorado Rockies

Dozens of interesting places to visit—Pike's Peak, Estes Park, Colorado Springs, Manitou, Royal Gorge, Glenwood Springs, Denver.

Dozens of things to do—mountain climbing, trout fishing, bear hunting, golfing, polo and autoing; or just saunter around and get tanned

Two weeks in the cool, invigorating Colorado air will give you a new lease of life.

Low-fare, round-trip excursions all summer.

You will enjoy reading "A Colorado Summer."

Grand Canyon of Arizona

Miles wide, a mile deep, and painted like a sunset. En route visit the Indian pueblos of New Mexico and Arizona, and spend a day in the Petrified Forest of Arizona.

El Tovar hotel, under management of Fred Harvey, looks after you when at the Grand Canyon. As much like a country club as a hotel can be.

Stop off here on your way to California. A Pullman to the rim.

You will enjoy reading "Titan of Chasms."

Santa Fe

Write for our illustrated Summer travel books and train folders.

W. J. Black, P. T. M.
1119 Railway Exchange
CHICAGO

Yosemite Valley

Beyond a doubt the loveliest of mountain valleys.

In the cool Sierras of California, a mile above the sea, rimmed by sheer cliffs, thousands of feet high.

Can you imagine a more delightful vacation than camping among its giant redwoods?

Low-fare summer excursions. A side trip from the California Limited.

You will enjoy reading "Yosemite Valley."

California Seashore

Bathe in the blue Pacific and try deep-sea fishing.

Or perhaps you may enjoy golf, tennis or motoring more. California maintains miles of smooth, dustless roads. Magnificent resort hotels and comfortable "tent cities."

It's cool along the coast all summer.

Low-fare summer excursions. Ever try the California Limited?

You will enjoy reading "To California over the Santa Fe Trail."